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ORIGINAL ARTICLES.

THE LIMITATIONS OF CONSERVATIVE SURGERY ON THE FEMALE GENITAL ORGANS.¹

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MUTILATION of human parts is abhorrent. Every organ has a right to exist until pathologic processes destroy its function, put it beyond repair, or constitute its presence a destroyer of health or a menace to life. Conservatism in pelvic surgery contemplates repair of diseased but redeemable structures, with abatement or removal of morbid conditions, restoration of function, relief of suffering and saving of life. The mere recovery from operation does not constitute success. The test should be relief of symptoms. Surgical discretion is a rare gift. Clean hands, operative skill and a good technic are common. Thus, unnecessary ablations continue because they can be safely accomplished and because unripe operations lack that discernment and judgment without which one is unable unerringly to decide when radical methods should give place to milder ones.

Conservatism must accomplish all that radicalism can, and more, in restoring the integrity of parts without sacrifice. Failing in this, or when extended beyond safe and legitimate bounds, conservatism may become rank radicalism. It is desirable, therefore, to fix its limits as accurately as possible, seeing how variable are the conditions involving its application. Every discreet surgeon enters the pelvic cavity prepared to alter his preconceived plan if unexpected conditions arise. In the selection of a final method in such cases as admit of conservatism he will be governed by (1) the age of the woman; (2) the nature of the malady; (3) the extent of the lesion and the existence of complex pathologic states; (4) the patient's physical condition; and (5) the probable necessity of a second grave operation.

Age of the Patient.—To a woman during the child-bearing period the preservation of the uterus and at least one tube and ovary (or even a portion of the latter) should be accomplished if it can be safely done. Nothing but positive necessity can justify the unsexing of such women. They constitute the peculiar

charge of conservative pelvic surgery, and a greater latitude is allowed on account of the importance, for every reason, of their generative organs. Here such measures as carry with them the likelihood of failure and even some risk to life may be resorted to in their behalf. To one approaching the menopause the argument in favor of conservatism is less forcible, but even here it is most desirable to avoid the sudden cessation of the menstrual flow, if it can be avoided. To one past the menopause the ovary alone seems (on account of its internal secretion) to be important, save for the minor consideration of the mechanical advantage of preserving the uterus.

The Nature of the Malady.—It is obvious that no attempt at conservatism should be made in cases of malignant neoplasms, tuberculosis, or suppurative diseases of the tubes or ovaries due to the more malignant pyogenic organisms.

The Extent of the Lesion and the Existence of Complex Pathological States.—Even when most extensive involvement of an organ exists there may remain a small unaffected portion whose preservation would be desirable, but the difficulties connected with identifying and isolating such a healthy portion, in the presence of extensive disease, are great and often determine in favor of radical procedure. Not infrequently upon exploration of the pelvis it is found that the condition for which operation was undertaken is so complicated by other pathological states that the mode of procedure originally contemplated must be abandoned for more radical measures. Thus uterine fibroids may give rise to conditions of the tubes and ovaries necessitating their removal. In such a case little would be gained by saving, at the expense of a tedious operation, a uterus which would at best be a functionless organ.

The Patient's Physical Condition.—Conservative measures, as a rule, involve more extensive manipulations than do radical procedures, hence the latter must at times be adopted where the local conditions would suggest conservatism but where the patient would be unable to stand the prolonged anesthesia and the shock incident to tedious operative measures.

The last of the above considerations—the possible necessity of a second operation—can best be illustrated by one of several cases which have recently come under my observation, and the like of which is constantly met with by pelvic surgeons.

Mrs. X., aged forty-seven years, mother of four

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children. After birth of the last, sixteen years ago, without any acute illness she became a confirmed invalid, unable to undergo any exertion and confined to bed most of the time, her longest walk being from her bed to a lounge. Four years ago she consulted a surgeon who discovered a lacerated cervix and perineum, which he repaired. Her symptoms not improving, one year later she again placed herself under his care and was treated for six months with local applications, but without benefit. Two years ago she consulted another surgeon who performed a laparotomy and removed a cyst of one ovary, a hematoma of the other, six myomata (by six separate incisions), and performed a suspension of the uterus.

These conservative measures not affording relief, I was called to the country to see her last August. Upon examination the uterus was found fixed by the operation of suspension, the ovaries and tubes matted together by dense adhesions, and all of the pelvic organs exceedingly painful. I advised radical operation and this was consented to. Upon exploration of the pelvis, after abdominal section, the omentum for about the space of a hand's breath was found adherent along the line of the previous abdominal incision. The uterus was firmly suspended by a strong false ligament and adherent to both the bladder and rectum. It contained three fibroids. Tubes and ovaries were bound down by dense adhesions. The right ovary, from which the cyst had been previously removed, contained several cysts of various sizes, and the left contained a hematoma the size of a hickory nut. Both tubes were the seat of follicular hydrosalpinx. I proceeded to break up the adhesions and performed an oophoro-salpingo-hysterectomy.

This patient made a perfectly satisfactory recovery. On the seventh day after operation she volunteered the statement that she realized that the cause of her illness had been removed and that she felt she was cured. At the end of the third week she was out of bed and one week later she was able to walk better than at any time since the beginning of her illness, sixteen years ago. She is now cured.

In considering the desirability of conservatism in any given case, account must be taken of the relative importance of ovaries, uterus, and tubes. Of these structures the ovary occupies the first place, for the reason that its removal renders uterus and tubes functionless, while, on the other hand, removal of the latter leaves the ovary robbed of its prime function but serving other useful ends. Next in importance stands the uterus, but only, so far as we know, when at least a portion of an ovary can also be preserved. Efforts to preserve tubes alone are not desirable, since these structures are functionless in the absence of ovaries and uterus.

Though only within very recent years has it been conclusively demonstrated that the internal secretion of the ovary is of great importance in the female economy, and strongly suggested (though not proved) that the function of menstruation is more

than a monthly inconvenience, still not even these most convincing arguments against the unnecessary removal of the organs concerned are stronger pleas for conservatism than is the moral question involved and the often lamentable mental condition following the unsexing of a woman. This latter consideration is more powerful than ordinarily considered, for women are naturally loth to express themselves freely in matters bearing on sexual relations.

Admitting the wisdom of and justifying the attempts made to defend and restore every pelvic structure presumably capable of regeneration, I may lay down some rules which will fix the limits of our efforts to restore to function and health in the common maladies coming to our notice.

The Ovary. Hematoma.—When large, painful and producing reflex nervous symptoms and occupying the bulk of a single ovary, removal of the organ is required.

Graafian Cysts.—If these be numerous and apparently involve the entire ovary ablation is to be practised. Their removal by dissection means many cavities to be closed by much suture material, the possibility of blood clots, supplying foci for infection, and, later on, painful cicatrices and no amelioration of the symptoms produced by the cysts.

Abscess.—If large and centrally located its removal intact is demanded. Its incision and drainage mean possible direct infection and peritonitis, the probable invasion of the parts sought to be saved with recurrence, a failure to rescue any useful portion of the gland. The urgency of complete removal is enhanced in the presence of systemic infection.

Dermoids.—Unless both ovaries are implicated, dermoids should be treated by complete removal. Even when both organs are affected it may be safer to be radical, inasmuch as these tumors are prone to destroy the organ and likewise to set up an inveterate form of local peritonitis with the formation of painful and dangerous adhesions, which inflammation is only cured by ridding the patient of the diseased parts.

The Tubes.—The uterine tubes should be amputated in (1) extra-uterine pregnancy, whether ruptured or unruptured, if the tube is much enlarged and altered; (2) in kinks and strictures if these are numerous, decided, and accompanied by dense adhesions, because having established by operation the perviousness of the lumen under such conditions, it cannot by any means at our command be maintained and may be followed by either hydro- or pyosalpinx; (3) in hydrosalpinx of either the follicular or flowing varieties, for the reason that the naked eye cannot define the limits of the former, and the latter will yield to no other treatment. In simple hydrosal-

pinx, if the tube is greatly distended, its walls much thinned and in the presence of adhesions; (4) in pyosalpinx in every instance where the infection is other than gonococcal and in these if the abscess cavity is large and the tube walls much impaired. Indeed, attempt to save a suppurating tube is rarely justifiable.

The Uterus.—I shall speak only of the application of operative measures to fibroids. Myomectomy was a great advance in the treatment of fibroids. It seems horrible to sacrifice an otherwise normal uterus on account of the presence of removable fibroids, yet unnecessary hysterectomies continue. Perhaps the most difficult problem in determining between conservatism and radicalism presents itself when the surgeon comes to deal with fibroids. There are two conditions, which, if existing, lead to a speedy conclusion. The presence of a limited number of only subserous tumors at once indicates the removal of the tumors only. On the other hand, if the tumors are deep-seated, or embrace the bulk of the uterus, or if they are very large, nothing is to be accomplished by hystero-myomectomy.

The doubtful cases are those in which the tumors are interstitial and small. Even here, when few and well defined, myomectomy may be undertaken with reasonable hope of success. The difficulty of distinguishing every nodule is very great, and where the number is large the numerous and deep incisions required for their extirpation render the operation for their complete removal tedious, dangerous and uncertain. I therefore contend that in every case at all doubtful, *except when they occur in young women*, hysterectomy is preferable to incomplete myomectomy. Overlooking and leaving a single nodule may destroy the permanent effect of the operation and require a second of a more thorough kind. The presence of complications, such as the coexistence of pathologic conditions in two or more organs, usually places the case beyond conservatism, as may the existence of disease in remote organs.

While conservatism properly applied is both wise and humane, to be tolerated it must accomplish what it seeks to do. In its application, the soundest judgment, the ripest experience and consummate skill must be present. The difficulties which encompass it are great:

1. It often entails prolonged effort, thus increasing the liability to shock.
2. Extensive manipulations which denude the peritoneum, thereby increasing the risk of infection and setting up post-operative adhesions and, maybe, intestinal obstruction. By dealing with open pus-cavities, grave danger of infection occurs. It often requires many wounds, which mean much hemor-

rhage, numerous cavities to be repaired, foreign suture material left behind to accomplish these repairs, the possible formation of blood-clots, which furnish foci for infection, a likelihood of secondary hemorrhage, perhaps painful scars and almost certainly, when many points have been subjected to operation, post-operative adhesions.

3. The bruising of tissues incident to harsh methods of controlling hemorrhage, thereby impairing the recuperative powers and thus endangering the success of the undertaking.

4. Finally, the ever-present prospect of a second operation.

THE USE OF FORMALDEHYD GAS AS A DISINFECTANT FOR DWELLINGS, VEHICLES, AND HOUSEHOLD GOODS.¹

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FORMALDEHYD is now such a well known substance that it will be necessary for the purposes of this paper to only review in the briefest way its properties before discussing its practical use as a gaseous disinfectant. At ordinary temperatures it is a gas having the chemical formula CH_2O , and possessed of an extremely pungent odor, very irritating to the mucous membranes of the eyes and nose. It is an unstable compound, for its molecules tend to combine and produce other substances having utterly different chemical and physical properties. Thus three molecules combining together form trioxymethylene or paraform, a white crystalline body almost inert, but which by heat is decomposed again into formaldehyd gas.

Formaldehyd is usually manufactured in large quantities from methyl alcohol by allowing its vapor mixed with air to come in contact with platinum or other substances heated to redness. For disinfection purposes, however, this has not proven either a very practical or a very economical method, and it is now almost universally obtained from a thirty-five to forty-per-cent. solution in water, called commercially formalin, or from its solid form, trioxymethylene.

Formaldehyd has the important property of uniting with nitrogenous products of decay thus forming true chemical compounds which are odorless and sterile. It is thus a true deodorizer. It has also a peculiar action upon albumen which it converts into an insoluble and indecomposable substance. It is from this power of combining chemically with the

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albumenoids forming the protoplasm of bacteria that formaldehyd is supposed to derive its destructive power against bacteria. Formaldehyd is comparatively non-toxic to the higher forms of animal life and considerable quantities of it have been inspired without fatal effect.

If we consider now the practical application of formaldehyd gas for purposes of disinfection we find that its destructive action on micro-organisms depends upon a number of factors, the chief of which are its concentration in the atmosphere surrounding the bacteria, the length of time of the contact, the existing temperature, the accompanying moisture, and the nature of the organism.

The necessary concentration of the gas in the atmosphere to kill the micro-organisms varies with each species, for some resist chemical agents much more than others; and also with the freedom of access of the gas to the bacteria, for if they are under cover or within fabrics a greater amount of gas must be generated than if they are freely exposed. For purely surface disinfection when the less resistant bacteria or other organisms are to be destroyed six to ten ounces of formalin of full strength to 1000 cubic feet suffices. For the destruction of the more resistant but non-spore bearing forms, such as typhoid fever or tubercle bacilli, at least three times the smaller amount of gas specified above should be generated. The gas penetrates through fabrics with difficulty, and to pass through heavy goods the concentration of the gas must be increased tenfold and moderate heat added.

The Value of Moisture.—At first it was thought by many that formaldehyd gas acted more effectually in a dry atmosphere, but further investigation has proven that although it does destroy bacteria with the amount of moisture usually present in the air yet it acts much more powerfully and certainly when additional moisture is present and best when present up to the point of saturation.

A fairly high temperature, but one still below that which would injure delicate fabrics, increases not only the activity of formaldehyd gas, but also its penetrative power, and for heavy goods some heat is essential. The production of a partial vacuum in the chambers containing the goods before the introduction of the formaldehyd gas still further assists its penetration.

The length of exposure necessary for disinfection depends upon the nature of the bacteria producing the disease for which disinfection is carried out, the penetration required to gain access to the bacteria, the concentration of the gas used, the amount of moisture in the air, the temperature of the air and the size and shape of the room. For sur-

face disinfection in rooms when as much as twelve ounces of formalin is used for each 1000 cubic feet five-hours' exposure is amply sufficient, most bacteria being killed within the first half hour. For the destruction of micro-organisms protected by even a layer of thin covering, double the formalin and double the time of exposure should be allowed, and even then the destruction of many species of the more resistant non-spore bearing bacteria cannot be counted upon under the conditions met with in ordinary rooms. If absolutely complete disinfection is demanded, where penetration is required, the goods must be placed in special chambers where moderate heat can be added and all leakage of gas prevented.

Various forms of apparatus can be properly employed to liberate formaldehyd gas for purposes of disinfection. As each of these is lauded by its maker as the best, it may be of interest to give the results obtained by us from those in most common use.

1. *From Wood Alcohol.*—A number of lamps have been devised, all very much on the same principle, though varying somewhat in mechanical construction, which bring about the incomplete oxidation of methyl alcohol by passing the vapors mixed with air over incandescent metal. Although disinfection can be carried out by the best of these lamps, in our experience none of them is satisfactory or economical. They are amply sufficient for deodorization.

2. Commercial formalin is mixed with double its volume of water and placed in a suitable apparatus and boiled. The addition of water is for the purpose of diluting the formaldehyd and thus preventing its change into paraform, and also to add moisture to the air and aid the activity of the formaldehyd.

3. *From Formochloral by the Trillat System.*—This system consists in heating, under three atmospheres, a solution of formaldehyd gas in water mixed with thirty per cent. of calcium chlorid, known as "formochloral," to a temperature of 135° C. (255° F.). It is claimed for this method of producing the gas from formochloral that the polymerization of the formaldehyd is prevented, which would otherwise take place if a solution of formaldehyd were evaporated under ordinary conditions, and that thereby the whole of the formaldehyd is obtained in the gaseous state. The addition of any neutral salt aids the process, it is said, but calcium chlorid is the best. The formalin used for making the mixture should be free from methyl alcohol, otherwise, according to Trillat, this will combine with an equal quantity of formaldehyd, to produce methylal, a body having no disinfecting power, and thus cause

a loss of formaldehyd. The results with this apparatus have been satisfactory, but not more so than by other methods. The apparatus has the disadvantage of being expensive and heavy.

4. *From Formalin by the New York Sanitary Construction Company's System.*—This method consists in heating the ordinary commercial formalin to a temperature of 1000° F. or more in an incandescent copper coil or chamber and allowing the vapors to pass off freely. It is claimed for this method, in which the solution of formaldehyd is slowly introduced into an incandescent tube kept at a very high temperature, that the degree of heat is supplied necessary to break up the polymerized products formed, and thus a loss of formaldehyd is prevented. A further action of the intense heat in the copper tube on the solution is to convert the methylalcohol contained in commercial formalin into formaldehyd gas by partial oxidation, thereby preventing the formation of methylal and increasing the amount of formaldehyd.

The apparatus consists of a closed receiver of copper holding about a gallon, a coil of copper pipe attached at one end to the bottom of the receiver, and, like the preceding apparatus and the one to be described later made by Lentz, at the other by means of a suitable connection (rubber tube with gutta-percha or metallic endpiece) with the room or apartment to be disinfected; and a heating lamp or Bunsen burner. In operation the desired quantity of formalin is placed in the receiver and the receiver is closed. The lamp is lighted and the coil brought to a red heat. The valve is then opened and the solution contained in the receiver is allowed to pass down and into the coil in a fine stream. Upon coming in contact with the heated metal, the formaldehyd solution is instantly decomposed and the gas liberated. The apparatus is fitted with a handle by which it may be carried, and weighs about 15 pounds, when filled. The receiver need not be refilled until the contents are exhausted. Six to twelve ounces of formalin are sufficient to disinfect 1000 cubic feet of space. The results with this apparatus, so far as our observation goes, have been as good as those obtained by any other means. The apparatus is rather expensive and slow in operation and is somewhat liable to get out of order.

5. *From Trioxymethylene or Paraform by Schering's System.*—This system consists in heating the solid polymer of formaldehyd, trioxymethylene, in a lamp specially constructed for the purpose by the Chemische Fabrik auf Actien in Berlin. The trioxymethylene for convenience is used in the form of compressed tablets or pastils. Each pastil contains the equivalent

of 100 per cent. of formaldehyd gas, according to the manufacturers, and weighs one gram.

The mode of using the apparatus is very simple. The disinfector is placed upon a sheet of iron on the floor of the room to be disinfected. From 100 to 200 pastils can be evaporated at a time in the apparatus. For the production of greater quantities of formaldehyd vapors, several of these outfits must be used together. The lamp is filled with alcohol, about four times as many cubic centimeters of the alcohol being employed as there are pastils to be evaporated. The wicks should project but little above the necks of the burners, or the apparatus may get too hot and ignite the pastils. The vessel is charged with formalin pastils, and the disinfector placed over the lighted spirit lamp. The lamp is allowed to burn out in the closed room. Seventy-five pastils are considered to be sufficient for the disinfection of 1000 cubic feet of space. Lately a small steam boiler has been added to the apparatus for the purpose of furnishing sufficient moisture with the gas. The results obtained by us in superficial disinfection when from 150 to 200 pastils have been used to each 1000 cubic feet have been good. The great advantage of the method is in its small initial cost and in the ease of employing the apparatus and the avoidance of the danger of deterioration which is present to some extent in formalin.

6. *From Formalin to Which Glycerin Has Been Added.*—A very convenient apparatus of somewhat greater cost than that of Schering is prepared by Charles Lentz and Sons of Philadelphia. To the formalin is added 10 per cent. of glycerin and the mixture is simply boiled in a suitable copper vessel, the steam and formaldehyd gas passing off by a tube similar to that used by the Sanitary Construction Company and Trillat Systems. In our experiments, which have not been very extensive, the addition of the glycerin has not seemed to add much to the effectiveness of the formalin.

With a slightly greater amount of formalin than that used in the high temperature autoclave and heated-tube methods the results seem to be equally as good. The apparatus is very easy to use, rapid in action and not liable to get out of order.

CONCLUSIONS.

As a result of the investigations undertaken in the Department of Health Laboratories on the use of formaldehyd as a disinfectant, and a consideration of the work of others the conclusions reached may be summarized as follows:

1. *Disinfection of Infected Dwellings.*—Exposed surfaces of walls, carpets, hangings, etc., in rooms may be superficially disinfected by means of formal-

dehyd gas, all apertures being tightly closed, when employed in the proportion of 12 ounces of formalin or 5 of paraform to each 1000 cubic feet, the time of exposure to be not less than four hours, and the temperature of the apartment not below 52° F. Under these conditions non-spore bearing bacteria are entirely or almost entirely destroyed when freely exposed to the action of the gas. Spore-bearing bacteria, such as anthrax bacilli, are not thus generally destroyed. But these latter are of such rare occurrence that in house-disinfection they may practically be disregarded, and if present, special measures can be taken to destroy them.

The penetrative power of formaldehyd gas at ordinary room temperature, even when used in double the strength necessary for surface disinfection, is extremely limited. Articles, therefore, such as bedding, carpets, upholstery, clothing, and the like, should when possible be subjected to steam, hot air, or formaldehyd disinfection in special chambers constructed for the purpose. If not, they must be thoroughly exposed on all sides. Diphtheria bacilli are fortunately among the most easily destroyed bacteria.

2. *Disinfection of Bedding, Carpets, Upholstery, etc.*—Bedding, carpets, clothing, etc., which would be injured by steam may be disinfected by means of formaldehyd gas in the ordinary steam disinfecting chamber, the latter to be provided with a heating and vacuum apparatus and special apparatus for generating and applying the gas. The gas should be used in the proportion of not less than tenfold the amount used for surface disinfection, the time of exposure to be not less than eight hours, and the temperature of the chamber not below 110° F.

In order to insure complete sterilization of the articles they should be placed so as to allow of a free circulation of the gas around them; that is, in the case of bedding, clothing, etc., these should either be spread out on perforated wire shelves or loosely suspended in the chamber. The aid of a partial vacuum facilitates the operation. Upholstered furniture and other articles requiring much space should be placed in a large chamber, or better, in a room which can be heated to the required temperature. The most delicate fabrics, furs, leather, and other articles which are injured by steam, hot air at 230° F., or other disinfectants, are unaffected by formaldehyd.

3. *Disinfection of Books.*—Books may be satisfactorily disinfected by means of formaldehyd gas in the ordinary steam chamber as above described, and under the same conditions of volume of gas, temperature, and time of exposure. The books should be arranged to stand as widely open as possible upon

perforated wire shelves set about one or one and one-half feet apart in the chamber. A chamber having a capacity of 200 to 250 cubic feet would thus afford accommodation for about sixty books at a time. Books cannot be satisfactorily disinfected by formaldehyd gas in houses and libraries, or anywhere except in special chambers constructed for the purpose, because the conditions required for their disinfection cannot otherwise be complied with. The bindings, illustrations, and print of books are in no way affected by the action of formaldehyd gas.

4. *Disinfection of Carriages, etc.*—Carriages, ambulances, cars, etc., can be easily disinfected by having built a small, tight, brick building, in which they can be enclosed and surrounded with formaldehyd gas. Such a building is used for disinfecting ambulances in New York City.

5. *Advantages of Formaldehyd Gas over Sulphur Dioxid for the Disinfection of Dwellings.*—Formaldehyd gas is superior to sulphur dioxid as a disinfectant for dwellings, first, because it is more effective in its action; second, because it is less injurious in its effects on household goods; third, because, when necessary, it can easily be supplied from a generator placed outside of the room and watched by an attendant, thus avoiding, in some cases, danger of fire. Apart from the cost of the apparatus and the greater time involved formaldehyd gas generated from commercial formalin is not much more expensive than sulphur dioxid, viz., 20 cents to \$1 per 1000 cubic feet against 10 cents with sulphur.

Formaldehyd gas is the best disinfectant at present known for the surface disinfection of infected dwellings. For heavy goods it is far inferior in penetrative power to steam and dry heat at 230° F., but for the disinfection of fine wearing-apparel, furs, leather, upholstery, books, and the like, which are injured by great heat, it is, when properly employed, better adapted than any other disinfectant now known.

The experimental work upon which these conclusions are largely founded was done in conjunction with Dr. Arthur A. Guerard, and Dr. Robert J. Wilson, Assistant Bacteriologists, New York City Health Department.

OTOLOGY; ITS RELATION TO GENERAL MEDICINE.

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THE family physician, as a rule, is the first to be consulted in incipient ear trouble, and as a great many of the cases require immediate attention it behooves him to be somewhat familiar with the aural

symptoms; and to know how to meet them. The busy practitioner has little time to devote to the study of otology; in fact, as a rule, there is no branch of his profession which he dislikes or neglects more. This is a fact much to be regretted, for there probably is no class of diseases which, if neglected or improperly treated, will result so disastrously to the patient as those of the ear. This statement is emphasized by the vast number of patients with preventable deafness who present themselves to the specialist with a bad purulent discharge from the ears which has existed since childhood.

The great majority of ear diseases have their inception in infancy and early childhood and many of them are closely connected with certain general diseases, especially the acute exanthemata, and for this reason they are all the more liable to be overlooked both by the medical attendant and the parents who are mostly concerned about the general affection without any suspicions of a local one. In the consideration of my subject I shall endeavor to be as brief as possible in my reference to those aural affections which the general practitioner is called upon to treat, and will omit entirely any reference to the treatment of those diseases which require the attention of the aurist.

Hereditary tendency, age, occupation, and habits, are strong factors in the causation of all forms of ear disease, but the occurrence of the large majority of such diseases, especially during infancy and childhood, can be ascribed to some one of the infectious or febrile diseases. Many a case of permanently impaired hearing may be traced to the failure of the medical attendant or parents to recognize the existence of ear trouble during a siege of acute febrile disease. At such a time, when one's resources are taxed to the utmost in combating the systemic trouble, he is not apt to direct special attention to the condition of the ear and, ordinarily, it is not until convalescence begins that the aural symptoms are noticed. During the course of any of the acute febrile or infectious diseases frequent and thorough inspection should be made of the ear, the nose, throat, and nasopharynx, even though there may be no aural symptoms complained of by the patient. The latter organs are the starting-points of many cases of incurable deafness, the mucous membrane of these being involved in nearly all the acute infectious and febrile diseases. The extension of this catarrhal condition to the Eustachian tubes, unless properly treated, will almost invariably cause middle-ear trouble. The rhinitis associated with scarlet fever or measles has an especially virulent effect upon the middle ear and particularly so when either one is accompanied by nasopharyngeal diphtheria. The latter dis-

ease may extend through the Eustachian tubes into the tympanum, causing ulceration and destruction of tissue. In some cases, when the micro-organisms invade the labyrinth, severe and even total deafness may result. Paralysis of the palate is also of frequent occurrence and this interferes with the proper ventilation of the tympanum, sooner or later producing a hyperemia and catarrh of the middle ear. Ear disease may also originate during an attack of smallpox, chickenpox, whooping-cough, or mumps.

Of the acute febrile diseases which enter into the etiology of aural affections influenza ranks first, being accompanied in many cases by an intense aural hyperemia entirely disproportionate to the conditions usually seen. Deafness to a certain degree is very common during an attack of typhoid fever and, unless it receives early and proper treatment, is quite likely to be permanent. In pneumonia and bronchitis middle-ear trouble may result from the passage of the infectious germ through the blood current and its lodgment in the tympanic mucous membranes, or by the condensation of air in the middle-ear brought about by excessive coughing. The syphilitic, rheumatic, tubercular, and strumous cachexiæ, predispose to and unfavorably influence diseases of the ear. Syphilis induces catarrhal swelling of the mucous membrane of the middle ear and the auditory nerve becomes secondarily affected. Aural diseases of rheumatic origin are usually chronic or have a tendency to occur frequently. Oft times they are accompanied by no general rheumatic symptoms until weeks or months after the aural lesion has become manifest. The almost incurable progressive deafness accompanied by tinnitus aurium is most frequently of a rheumatic nature. In tuberculosis the most common ear trouble is a chronic, persistent, and destructive suppuration of the tympanum. Lesions of the ear are as common with kidney trouble as lesions of the eye. In Bright's disease a change in the tension of the labyrinth may be brought about by interference with the general venous circulation. Eczema of the auricle and furuncles of the external auditory canal are of common occurrence with diabetic patients. Intracranial diseases, such as brain fever, meningitis, cerebral tumors, abscesses, or hemorrhages, may diminish or destroy the hearing by direct damage to the auditory nerve or by causing anemia, congestion, or hemorrhage within the labyrinth. Cerebrospinal meningitis ranks first as a factor in the etiology of acquired deaf-mutism. Insanity seems to claim an almost exclusive companionship to hematoma of the auricle and the appearance of the latter makes the prognosis of the former very grave.

Whenever disease of any nature is accompanied

by nose and throat complications one should not forget the possibility of ear trouble arising and should at once secure freedom of respiration and perfect cleanliness of the nasal mucous membrane.

That certain drugs exert a specific influence upon the organ of hearing is a well-known fact. These changes constitute anemia or hyperemia of the labyrinth or tympanum, which nearly always passes off after a time but if the drug influence is pushed to any great extent structural changes are brought about in the labyrinth and more or less permanent deafness results. Quinin is particularly liable to affect the ear, and the habit of prescribing large doses of it to break up a cold in the head cannot be too strongly condemned. During an attack of coryza there is almost always more or less congestion of the middle ear which is greatly increased by the administration of quinin. Salicin and salicylic acid, with its salts, stand next to quinin in their influence upon the ears. Alcohol and tobacco used to excess may, through their influence upon the mucous membrane of the nose and throat, exert a deleterious effect upon the ear. This is especially the case when tobacco is taken in the form of a snuff or when the smoke is exhaled through the nose.

Certain pathologic conditions, especially in females of a neurotic or hysteric type, may produce alterations of function within the organ of hearing; thus otalgia is frequently the result of oral irritation caused by cutting, crowding, or caries of the teeth, inflammation of the gums, ill-fitting plates, etc. Nasal douches or syringes, either anterior or posterior, should never be used, as they are liable to force fluid through the Eustachian tubes into the tympanum. This fact has been particularly impressed upon the mind of the writer by a very severe attack of acute otitis media brought upon himself by the use of a certain douche which of all douches is considered the least harmful. Snuffs, either powder or liquid, should for the same reason be condemned.

Regardless of the fact that in nine-tenths of all aural diseases the pathologic process is on the inner side of the impervious drum membrane, "ear-drops" are being constantly prescribed for all forms of ear disease. It would be a difficult task to enumerate all the irritating substances that are being inserted, with all solemnity, into the outer ear passages; in fact, it sometimes seems that there are but few fluids which have not been used in this way. Perhaps the most commonly used domestic remedy is sweet oil and laudanum. If warm when inserted the heat for a few moments may slightly ease the pain, but the alcohol of the laudanum is irritating to the membrane, while the oil becomes rancid, irritates, and serves as a culture for aspergillus. The

same is true of all greasy substances so frequently put into the ear. Glycerin, which is one of them, robs the mucous membrane of all of its moisture and excites inflammation.

Perhaps the most common form of treatment adopted by the majority of practitioners for nearly all forms of ear disease is the use of the Politzer bag. All honor to Dr. Adam Politzer for giving to the profession this very easy and valuable method of inflating the middle ear, but I am of the opinion that if he could have foreseen the manner in which it was destined to be misused and the immense amount of harm that would result from its misuse, he would have hesitated long before making his discovery known. In many cases Politzerization is a dangerous procedure; for instance, in unilateral deafness, think of the wisdom of subjecting the well ear to such treatment, for it is impossible by this method to confine the air-pressure to one side. Many a case of deafness is produced or made worse by the stretching of the drum membrane due to over Politzerization. Rupture of the tympanic membrane is sometimes the result of too forcible a compression of the air-bag. This is particularly liable to happen when a patient is recovering from an attack of acute otitis media and the perforation in the membrane has just healed over. Attacks of mastoiditis may result from Politzerization during an attack of acute otitis media before perforation of the membrane and when the middle ear is partially filled with pus. Inflammation of the tympanum may also be produced by a mucopurulent discharge being forced through the Eustachian tubes from the nose. The same objections contraindicate Valsalva's method of inflation, though in a less degree.

Syringing out the external auditory canal in proper cases is a valuable procedure, but, unless done properly, may do considerable harm. The canal should be straightened by drawing the auricle upward and backward, and the current of water should be directed against the various sides of the canal, thus preventing too much force from being exerted against the tympanic membrane. The water should be of a proper temperature, and the canal should be thoroughly dried afterward. The prolonged presence of water in the canal, even at the temperature of the body, is liable to cause trouble. This fact is emphasized by the vast increase in the number of aural cases during the swimming season. For the same reason the practice of prescribing the syringe for the patient to use or have used at his own home certainly seems unwise. Blisters and poultices, over or in the region of the ear, are certainly of limited usefulness and considerable harmful potency. Poultices or hot water used to excess dur-

ing an acute inflammation of the middle ear soften the membrana tympani and hasten its rupture. If used after perforation they favor the growth of granulations, and have been known to cause facial paralysis.

Having so far dwelt principally upon the causes of ear disease, I will briefly refer to the remote affections and symptoms which are secondary to or dependent upon such diseases. Considering the rich supply of nerves in the external and middle ears, and the free anastomosis of these nerves, it is not to be wondered at that pathologic changes within these parts may give rise to remote symptoms. Thus, through the trigeminal and pneumogastric nerves, branches of which supply the external and middle ears, the stomach, lungs, or diaphragm may suffer from reflex irritation brought about by hardened cerumen, foreign bodies, etc., in the external auditory canal. Ear disease, by reflex irritation of the pneumogastric nerve through the medium of the trigeminal, is capable of establishing and maintaining an irritable state of the digestive apparatus. Cases of cough arising from aural reflex are not uncommon. They are usually spasmodic and persistent in character, so whenever a cough of that nature does not respond to the usual treatment an examination of the ear will often reveal the cause and the removal of the irritation will effect a cure. Hiccough is frequently dependent upon aural irritation. The writer has in his care at the present time a patient with catarrh of the Eustachian tubes, who, on several occasions has been awakened from sleep by a very severe and rapid hiccough, which is relieved by Valsalva's method of inflating the middle ear.

Eye symptoms, such as nystagmus, strabismus, paralysis of the superior oblique muscle, or contraction or dilatation of the pupil may also result from aural irritation. Brain complications resulting from neglected ear disease are quite common. Abscesses of the brain, meningitis, phlebitis, sinus thrombosis, epilepsy, facial paralysis, and vertigo are some of the possible results of neglected purulent inflammation of the middle ear and the etiology in many such cases is first discovered in the post-mortem room. Statistics show that more than one-half of all brain abscesses are caused by ear disease and that not far from two thousand deaths occur annually in Great Britain and four thousand in the United States from this result. Bergman asserts that the history of otorrhea, past and present, together with persistent sleeplessness and a temperature remaining steadily at about 99° F. are sufficient indications for opening the cranial cavity for the purpose of exploration. Irritation in the external or middle ear

or any condition which will produce an alteration of intralabyrinthine pressure may cause vertigo which is often mistaken for stomachic vertigo or the so-called bilious epilepsy. Woakes of London claims that all vertigo is essentially auditory in its location and that when it exists where there has been no prior ear disease it is due to reflex impressions.

Earache is a very common complaint, especially in children, and although the majority of the subjects recover without the aid of a physician the prompt and proper treatment in many instances is of vital importance to the patient. A large percentage of the permanently deaf may trace the beginning of their infirmity to an earache, which, being regarded by their parents or guardians as the merest trifle, was consequently allowed to go without the proper medical attendance. Pain in the ears nearly always means inflammation, and especially is this true if the hearing is impaired. In most instances it is caused by an acute congestion within the middle ear but may be due to some abnormal condition in the external auditory canal, such, for instance, as furuncles, impacted cerumen, and foreign substances. In exceptional cases it may be reflex from a decayed tooth or a hypertrophied tonsil. In any case the first thing to do is to locate the seat of trouble, which may be done by a thorough inspection of the parts, ascertaining whether or not there is any redness, bulging, or retraction of the drum membrane, any soreness in the external auditory canal, or any tenderness accompanying pressure upon the tragus or over the mastoid bone. Thorough inspection of the nose, throat, and teeth should also be made. If the hearing is not interfered with the pain in all probability is of a neuralgic origin.

The proper treatment to pursue in these cases of otalgia, when not of a neuralgic origin, is first, the application of leeches in front of the tragus. In very young children a small blister in the same location may be substituted unless the case is a severe one. Heat applied over the ear, or a hot boracic or carbolic solution instilled into the ear, will often act like magic in lessening the pain and aborting the congestion but care should be exercised not to continue the hot instillations longer than really necessary as too much moist heat will soften the tissues and make them an easier prey to the inflammatory process. Inflation of the tympanic cavity is advisable in many cases when there has been no formation of pus in the cavity. Sometimes the instillation of a warm solution of cocain, or atropin and cocain mixed, will allay the pain and abort the attack. Should these remedies fail to relieve paracentesis of the drum membrane should be performed at the

most dependent part. This procedure will immediately relieve the pain, prevent spontaneous rupture, and favor the evacuation of pus, which otherwise, through one of its several means of communication, might produce septic inflammation of the brain or mastoid cells. The puncture, under favorable circumstances, will heal up within a few days, with a complete restoration of hearing, while a spontaneous rupture would take much longer or may never heal at all, and in either case usually leaves the hearing more or less impaired. Following the puncture or rupture of the drum membrane is a mucous discharge, which if neglected or improperly treated will become purulent and have an offensive odor. The treatment of such discharges comprises cleanliness, drainage, and the removal of diseased tissue, this being accomplished by properly syringing out the ear with a warm antiseptic solution followed by the instillation of a saturated solution of boracic acid and an occasional and gentle inflation of the tympanum. If this treatment does not effect a cure all granulations should be removed and astringent solutions used. Insoluble powders should not be blown into the ear as they may occlude the perforation and cause mastoid trouble, and for the same reason the patient should not be allowed to wear cotton in the ear.

Foreign bodies in the external auditory canal, in the majority of cases, are best removed by the syringe, care being taken to direct the current of water against the walls of the canal instead of against the substance itself. Inspection should also be made after each syringeful has been injected in order to ascertain the effect. A camel's-hair brush dipped in glue and brought in contact with the foreign substance and allowed to dry will often be of service in its extraction. Instruments should not be used until these means have failed, as, especially in the hands of the inexperienced, they may do great damage to the drum membrane and to the walls of the canal. In many cases more damage is done by the attempts at extraction than by the presence of the foreign body itself. Several cases have been reported in which the substance has been shoved through the drum membrane into the tympanum, producing middle-ear inflammation followed by cerebral disease and death. Unless the attending physician has the proper means at hand for removing the foreign substance, and is quite sure of success it is better for the patient to leave it alone in spite of the urgent demands of the parents or friends until such a time as the proper means and skill can be secured. Foreign bodies in some cases may remain in the ear for an almost indefinite period without exciting any local irritation and sometimes even

without the patient's knowledge. Children often place foreign bodies in their ears and say nothing about it for fear of punishment, and they may not be discovered for months afterward. It is always well in such cases to examine both ears. Not long ago a sister from one of our charitable institutions brought a little girl to me with a stone crowded into the external auditory canal of the right ear. Upon inquiry as to how it got there, the answer was that another little girl threw it in. Knowing such a thing to be impossible, and suspecting that it had been inserted by the patient herself, I asked her if she had anything in the other ear, to which she replied "No." Inspection of the left ear, however, revealed the presence of a substance which proved to be a wad of paper literally covered with hardened cerumen. It must have been in there at least several months. Insects frequently get into the external auditory canal and often cause intense pain. The best method to pursue in such cases is first to pour in some warm sweet oil, and then after a few moments syringe it out.

Impacted cerumen does not occur in ears otherwise healthy but in the majority of cases is the consequence of a chronic, non-suppurative inflammation of the middle ear, or of some irritation transmitted by the trigeminal nerve to the tympanum and auditory canal, therefore, it is not sufficient in these cases simply to remove the cerumen but to look for the cause of it. Impacted cerumen may be very easily removed by the syringe, the surgeon being particular after its removal to thoroughly dry the canal and inflate the tympanum. If it is too hard to remove in this way it may first be softened with a solution of bicarbonate of soda.

CLINICAL MEMORANDUM.

OBSTINATE HEMATURIA DURING PREGNANCY.¹

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MRS. H., aged twenty years, weight 157 pounds. Early in January, when she was about three-months pregnant, I prescribed without seeing her, elixir of buchu, juniper, and acetate of potash for painful and frequent micturition, which gave relief. Up to this time she had always been in good health. About three weeks ago, when she was possibly six-months pregnant, I was called in to see her on account of her having noticed blood in her urine. At first the percentage was very small. She was also suffering from pain in her back, and violent headache. Thinking possibly the hemorrhage was uter-

¹Read before the White County (Tenn.) Medical Society.

ine I made a vaginal examination, but found no blood coming from this canal. However, to make the diagnosis doubly sure I sterilized a soft rubber catheter, and drew off the urine, which contained a large percentage of fluid blood. The urine was loaded with albumin. After having applied heat and nitric acid it could scarcely be poured from the test-tube. Supposing this was due to the blood present in the urine I allowed a specimen to stand twenty-four hours and then tested the supernatant fluid, which showed a very high percentage of albumin. During two or three days she did not pass one pint per day. Her feet, hands, and face were but little swollen. I prescribed 15 grains of gallic acid, and 15 drops of tincture of iron, every four hours, alternating the two. For the headache I prescribed bromid of potash, 20 grains, every hour. Hot baths twice a day were ordered, and she was told to drink all the water she could. Her diet was restricted to milk and soup.

All the symptoms improved during the next forty-eight hours, with the exception of the hematuria, which grew steadily worse until at least two-thirds of the fluid she passed from the bladder was blood. The color of the fluid grew darker from the first until at its worst it looked exactly like freshly drawn venous blood. The reaction of the urine was neutral. The specific gravity for several days ranged between 1018 and 1024. At the end of about forty-eight hours her headache became very violent, and she grew exceedingly restless. The next time I visited her she was on the verge of an eclamptic convulsion. I at once gave her a hypodermic injection of morphin, and one hour later, one drop of croton-oil in a capsule. Within a very short time her bowels began to move, and in the next ten hours they acted perhaps ten or fifteen times. The discharges were free and watery. This seemed to relieve her and she obtained a few hours of refreshing sleep. The gallic acid and iron were continued night and day up to the afternoon of the third day without affecting the hematuria in the least. As it was increasing, and the patient growing anemic, with a pulse of 110, and a temperature of 99° F., I decided to discontinue the gallic acid, and gave her 10 drops of fluid extract of ergot every four hours, alternating with the iron, which I had gradually increased until she was taking 25 drops at each dose. She never vomited any of the medicine.

During the afternoon and night of the third day there passed from the bowels considerable fluid, very much like that coming from the bladder, only it appeared to be about the consistency of thin sorghum. The following morning I asked for a consultation, and Dr. Snodgrass of Sparta was telephoned for. After examining the patient he agreed with me and we continued the same treatment up to Wednesday the sixth day, when I ordered the ergot to be given every six hours instead of every four, because the patient stated that she had not felt the child move in the womb since Sunday. The urine was no better until Thursday morning, when it began to clear up, and by Friday morning it looked almost normal, and did not contain so much albumin. Thursday morning I discontinued the ergot entirely, but

continued the iron. Saturday morning the urine began to look bloody again, and remained so until Monday morning, when the patient miscarried. The quantity of urine did not increase much until after the delivery. The delivery was normal, the placenta and membranes coming away very nicely in about twenty minutes. The child was dead. It was very poor, the skin was flabby, wrinkled, and distinctly discolored, being of a dark pink. The cord was black, but no clots were in it. The fluid that escaped on severing the cord was dark and closely resembled the discharge from the bladder. From the hour of delivery every symptom began to grow better except the pulse. This remained at about 100 or 115 for several days.

There are several points of considerable interest in connection with this case. First, did the ergot kill the child? Second, was the hematuria relieved during Thursday, Friday, and a part of Saturday by the ergot, or was the cessation due to the death of the child? third, did we do right in giving the ergot? In the language of the gamester, we had to play for what was in sight, because no authority on the subject could we find. After searching diligently through all the journals and text-books at my command I failed to find one word on the subject, except the following report of a case under the head of "hemophilia," in the "American System of Obstetrics:" "Large, well-formed pallid woman, twenty-three years old. Three abortions, with profuse hemorrhage, within the first three years of her marriage. During the fourth pregnancy frequent severe nose-bleeding; in the fourth month *continuous hematuria*, then epistaxis. Premature labor at the beginning of the eighth month. Death from anemia one month later." In the MEDICAL NEWS of May 4, 1889, Barton Cook Hirst, M.D., gives a short report of a case of hematuria in pregnancy. This is the only mention of the subject I could find in the journals. Dr. Hirst's case was in some respects similar to mine. The woman, twenty-six years old, was six-months pregnant. The hematuria appeared suddenly, but did not increase nor become alarming, although it continued until the woman was confined, after which the urine began to clear up, and on the third day the blood had quite disappeared. There was no report of symptoms of eclampsia, albumin, no scarcity of urine, no persistent headache. The author says: "The explanation of this case, as of the majority in which bloody urine appears during pregnancy, is very likely to be found in bleeding hemorrhoids of the bladder, produced by the pressure of the large gravid womb on the pelvic veins." The only thing he says in regard to the treatment in such cases is the following: "The treatment in such a case can be little more than expectant until pregnancy is terminated, unless, in a rare event, the quantity of blood is alarming." There was poor consolation in such reports to men under the trying ordeal through which Dr. Snodgrass and I were passing.

The Consumption of Coffee.—The average annual consumption of coffee in the United States during the decade 1870 to 1880 was 792,000,000 pounds; in the next decade it was 1,326,000,000. In 1898 it was 1,580,000,000. The enormous increase in the use of this stimulant is another indication of the high tension life we are leading nowadays.

NEW INSTRUMENT.

AN IMPROVED URETHROSCOPE.¹

By FERD. C. VALENTINE, M.D.,
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It is too late in the scientific day to urge need of urethroscopy upon a learned society like this. Arguments in favor of making the urethra as accessible to sight and to operation as the external surface of the body would be as superfluous as diatribes against remedies advertised to "cure all urethral discharges." The question of urethroscopy now reduces itself mainly to the choice of instruments.

Three forms of urethroscope are in use. The simplest, of which the Klotz tube is the best type, requires a co-ordination between the head-mirror and the tube, which is difficult and requires much practice. Moreover, the reflected light cannot be as clear at the distal end of the

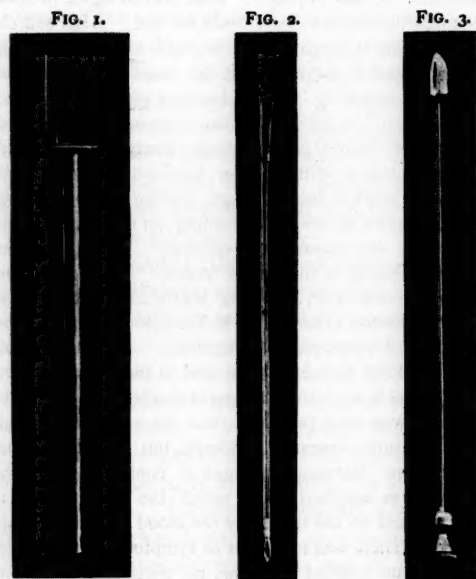


Fig. 1. Valentine's modified urethrosopic tube. The small spur on the disc is for attachment of the light-carrier, the large spur for that of the megaloscope.

Fig. 2. Light-carrier.

Fig. 3. Obturator for urethrosopic tube.

tube as it is at the visual end. Here a glare obscures vision, obliging the operator to look through a disturbing zone of more intense light, into one, six inches beyond, not by any means as clearly illuminated. The wonder is that Klotz has been able to do so much and such good scientific work with this instrument. The second class of urethral illuminators are those that use light projected directly into the urethra. The best of these is indisputably the Otis urethroscope. But it is a costly and some-what complicated instrument, for whose use one must needs have as much skill as its talented inventor. In the

third class, the Nitze-Oberlaender urethroscope hitherto stood alone. A little incandescent wire is carried into the depths of the urethra, bringing the source of illumination almost directly into contact with the sites to be examined. The advantage is too manifest for discussion; it is simply in obedience to the physical law that requires intensity of illumination for accuracy of vision. The objections to this apparatus are, first, its clumsiness, entailed by the continuous current of water required to keep the lamp cool. Secondly, the minute lamp readily burns out, and entails difficulty for its replacement, especially if it occurs in the midst of an examination. Thirdly, the size and weight of the apparatus, as well as its fragility, demand that it be kept stationary, necessitating a separate room for the purpose of urethroscopy. Fourthly, even if the canal be exceedingly large, the light must be removed from the tube to swab excess of secretion from the urethra and to make direct applications to diseased spots. Fifth, the apparatus is expensive, almost prohibitive to the majority of beginning practitioners.

The urethroscope I have the privilege of showing overcomes all the objections cited. Previous to describing it I may be allowed a moment to do an act of justice regarding its origin. While Dr. Henry Koch of Rochester and I were fellow-students in Berlin, I often discussed with him my thought of a sufficiently small but encapsu-

FIG. 4.

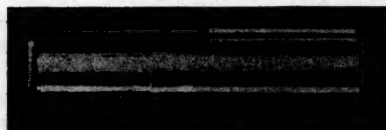


Fig. 4. Valentine's megaloscopic attachment for the urethroscope. Magnifies sixteen times.

lated electric light that would make urethroscopy easy and available to even novices in genito urinary work. I failed innumerable times to get manufacturers and workmen to make the light small enough for the purpose. Dr. Koch deserves the credit of having found and encouraged Mr. W. C. Preston of the Electro-Surgical Instrument Co. of Rochester to carry out my ideas on the subject. Under my directions the instrument has grown to its present conditions.

The apparatus consists of a small box containing four dry cells. These suffice for at least 350 deliberately performed, thorough urethroscopies. The price of a new set of cells is one dollar, making the cost of each urethroscopy less than one-third of a cent. The sources of electric light for other urethroscopes are either dip-batteries or accumulators. When they are exhausted from use or non-use, they require at least a day for recharging. The battery of my instrument can be replaced within five minutes. The tubes I use are similar to Kollman's modification of the Oberlaender tubes. Their burnished ends make it possible to examine the urethra from behind forward and from the front backward without giving the patient the slightest pain. The disc at the visual end of the tube is larger than those of other urethroscopes. A

¹ Presented at a meeting of the New York County Medical Society, held April 24, 1899.

small spur serves for attachment of the light-carrier, a large spur to hold a megaloscope, without which many minute urethral lesions would escape unaided vision. The light is encapsulated, making it possible to uninterruptedly examine all parts of the urethra and to perform all intra-urethral operations under the guidance of the eye. With a view to ascertaining whether under any circumstance the light might produce discomfort by its heat I have left it in the urethra as long as forty minutes. Not even the most sensitive patients complained of the slightest disturbance.

The entire apparatus is too simple to require any further description. A mere glance at its parts shows the purpose of each. I shall now have the honor of proving my assertions, through my assistants Dr. W. H. Prioleau and Dr. T. M. Townsend, who will show you the urethras of several patients as plainly as if the urinary channel were an open plain upon the hand or any other part of the surface of the body.

THERAPEUTIC NOTES.

The Subcutaneous Use of Mercury in Syphilis.—LEDERMANN (*Therapeut. Vade-mecum Haut. und Geschlechts Krankh.*, Berlin, 1898) advises the subcutaneous method of mercurial treatment in syphilis in preference to the percutaneous, or method by inunction, on the grounds that it can be controlled with greater exactness, being entirely in the hands of the physician. It is more certain and rapid in its effect. Sublimate forms the most practicable soluble salt of mercury in use; injections of 1 c.c. (m. xv) of the 1-1000 solution daily for forty days will usually effect a cure. Larger doses can be given at longer intervals. One c.c. of the 2½-per-cent. solution twice a week for sixteen injections is also used, but the author does not recommend the use of five-per-cent. solutions. The more concentrated solutions are placed deeply within the muscles. In the majority of cases the injection is said to be painless, and it causes only a slight infiltration which slowly disappears. Neisser and his pupils use the insoluble salicylate of mercury in ten-per-cent. suspension in liquid paraffin. Cure is effected by eight ½-gram (gr. viii) injections at three-day intervals, followed, if well-borne, by six 1-gram injections at six-day intervals, 10 or 12 grams of the suspension being used altogether. Neisser uses a needle of special design which he allows to stand in aseptic liquid paraffin, and cleans the site selected for the injection with 1-1000 bichlorid or two-per-cent. lysol solution.

Drugs in Diabetes Mellitus.—This affection (HARE, *Practical Therapeutics*) is the result of disordered function, and is not a disease *per se*, but is a symptom of several disease processes. Therefore, we vary the use of drugs according to the patient's condition, the quantity of sugar in his urine, and the cause of his diabetes. If there is rheumatism we must use a combination of potash and salicylic acid, using of the latter from 10 to 15 grains three times a day. For gouty subjects the iodids and colchicum are combined—and if this combination

proves ineffectual, arsenic with lithium citrate or carbonate must be employed. Arsenic alone is used in all forms of diabetes, and should be given in fairly large, constantly repeated doses. Opium is used oftener than any other drug; we cannot explain the manner in which it acts. Morphin, grs. ¼-½, three times a day, or codein, from 1 to 5 grains, three times a day, are the alkaloids to be employed, of which large ascending doses must be given. Some patients take 7 grains of morphin, or from 20 to 30 grains of codein, three times a day. These alkaloids are given best one hour after meals. Of course patients who take such doses must be carefully watched. Jambul is an uncertain remedy. The dose is from 5 to 30 grains, once to thrice daily, and gradually increased until 1 ounce has been given in twenty-four hours. If cachexia comes on, iron, strychnin, bitter tonics, and the lactophosphates of lime and sodium are to be used to support the nervous and circulatory systems. Plethora, produced by high living and little exercise, must be treated by restrictive diet, moderate exercise, and purgation to relieve engorgement. Thirst should be allayed by the use of acidulated or non-purgative alkaline waters. In all cases the well-established rules as to diet must be observed.

For Pannus.—OHLEMANN ("Ocular Therapeutics," 1899) recommends Guthrie's ointment in the treatment of trachomatous pannus:

R Argenti nitratis	gr. xii
Liquoris plumbi subacetatis	gtt. viij
Petrolati	3 ii.

He advises also that if corneal ulcers complicate healing they should be scraped with a sharp spoon, and further treated with an iodoform ointment of the following formula:

R Iodoformi	gr. viiss
Vaselini	3 iiss.

The Treatment of Acute Gout.—The limb should be placed horizontally, or in a position slightly elevated above the level of the body (LUFF, in "Gout, Its Pathology and Treatment"). By means of a cradle the bed clothes should be raised from the affected part about which should be arranged warm packs of cotton wool saturated with a lotion, composed of sodium carbonate, ℥ iij; belladonna liniment, ℥ ij; tincture of opium, ℥ j, and water up to ℥ viij. A small portion of this lotion is mixed with an equal part of hot water, and this mixture is then poured on the wool arranged around the joint. The whole is then covered with oiled silk, and remains unchanged for eight hours. An initial dose of from 30 to 40 minims of wine of colchicum is followed by a mixture of from 10 to 20 minims of the wine with from 40 to 60 grains of citrate of potash, which mixture is given three times a day. Or the colchicum may be given in the citrate of potash as an effervescent mixture, using 30 grains of potassium bicarbonate to 20 grains of citric acid in each dose. The colchicum must not be pushed to the degree of producing extreme depression. After the inflammation subsides the doses of this drug are diminished until it is dispensed with. From 3 to 4 grains of blue mass are given on the first night, followed the next morning by

Epsom salts. Salines, containing sodium, should be avoided, for they diminish the solubility of sodium biurate. We must aim to relieve portal congestion rather than to produce powerful purgation. As anodynes, chloral, sulfonal, or trional, may be used. Or a full dose of extract of hyoscyamus, with blue pill may be given at night. Opium or morphin should be avoided. As to diet: For the first day or two, milk, with arrowroot or bread, or milk puddings made with rice, sago, or tapioca, or tea made with boiling milk instead of water, or weak tea with cold toast, thinly buttered, may be taken. The drinking of hot or cold water, or a mineral water (free from sodium salts) should be encouraged. The milk diet should be continued until the acute inflammation has subsided, when the patient may return to a more liberal diet, being careful not to take anything indigestible. Alcohol is contraindicated, except when there is a weak heart and a feeble irregular pulse. Beef teas and meat extracts and essences must be avoided at all times. They irritate the kidneys and interfere with the elimination of uric acid.

The Best Method of Prescribing Potassium Iodid.—The best method of administering iodid is doubtless in the form of an aqueous solution, in which one drop represents, approximately, one grain of the salt. To prescribe the two, ounce for ounce, results in a solution measuring eleven fluid drams, and one drop of this necessarily contains considerably less than one grain of the iodid. To overcome this PROFESSOR HYNSON, quoted in *The Bulletin of Pharmacy*, makes the following suggestion: Dissolve 480 grains of the salt in $5\frac{1}{2}$ drams of hot water, and then make up the solution to 8 drams with water. This always results in a solution representing one grain in each minim, and, approximately, in each drop. — *American Therapeutist*.

Rheumatic Joints Rubbed with Ice. — EWART (*La Semaine Med.*, April 12, 1899) says that if a rheumatic joint is not relieved of its pain by hot applications and the internal use of salicylates, that it should be rubbed with a piece of ice wrapped in flannel. This can be done by the patient himself. An almost immediate relief of the pain, and a delicious sense of coolness in the joint follows the application. It can be repeated two or three times a day if necessary. The cold friction also exerts a favorable action on the course of the disease.

Ecthol in the Treatment of Erysipelas. — DR. ROBERT C. KENNER reports twenty-two cases of erysipelas successfully treated by ecthol. This drug contains the active principles of *Echinacea angustifolia* and *Thyja occidentalis*. The dose for an adult is a teaspoonful every two to four hours. In connection with this internal therapeutics he emphasizes the importance of abundant nourishing food and local treatment. For the latter he advises a solution of potassium acetate, 15 grains to the ounce of water, applied every hour or two.

The Soda Treatment of Diabetic Coma. — HERZOG (*Berl.*

klin. Wochenschr., April 3, 1899) places great confidence in the early administration of large doses of soda in diabetic coma. If possible the soda should be given before the coma develops. By attention to the reaction of the urine to ferric chlorid, and by watching for an increase in the amount of ammoniates, or of oxalates, the approach of danger may be known. Even when the symptoms of coma come on, it is still worth while to begin treatment with the soda, using from 3 to 10 drams of the bicarbonate daily. Herzog also advocates the subcutaneous use of either normal salt solution, or of a solution of bicarbonate of soda, 3 to 5 per cent., the injections to be frequently repeated. An excessive use of the soda may cause diarrhea, symptoms of heart failure, and bloody urine, but the experience of Naunyn, no less than that of the writer, shows that it may clear up an attack of coma, either temporarily, or in some instances, permanently.

Dionin as a Cure for Morphinism. — FROMME (*Berl. klin. Wochenschr.*, April 3, 1899) has found that dionin, a hydrochlorate of morphin ethyl ether, is serviceable as a substitute for morphin in those who are in the habit of using that alkaloid. There have been numerous attempts to find some drug which would take the place of morphin, and prove less harmful than it is to the user. Opium, bromids, and various narcotics have been tried with indifferent success. Cocain has been found to be far worse than the drug which it has been used to supercede. Codein has perhaps given more satisfaction than any one remedy, but it has its limitations. The plan of treatment advocated is to withdraw the morphin gradually, though not too slowly, testing the reaction of the patient meanwhile, by varying doses of dionin, and also of inert solutions, such as soda phosphate, or chlorid, in order to see how much reliance can be placed on the patient's description of the effect of the dionin, as well as to determine his susceptibility to large or small doses. When the amount of morphin taken daily has been reduced to $\frac{1}{2}$ or $\frac{1}{3}$ of a grain, it is well to stop it altogether, and substitute the dionin for it. One grain of the latter may be sufficient to quiet the unpleasant symptoms due to the stoppage of the morphin, or it may require four or five times that amount, according to the circumstances. Experience has shown that it is better to give an injection without waiting too long, as quiet will follow a small dose given in the beginning of the restlessness, while a much larger dose may be without effect if one waits until the storm is fully developed. Dionin is readily soluble in water (1 to 10), and particularly in warm water, so that it is fitted for subcutaneous use. It is manufactured by Merck.

Eucain in General Surgery. — HOWARD LILIENTHAL (*Annals of Surgery*, May, 1899) advocates the use of local anesthesia, using by preference eucain, even in such operations as castration, colotomy, and colecystotomy. He reports cases illustrating its use in all of these operations. The patient suffered no pain and in some instances assisted in the operation.

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SATURDAY, MAY 13, 1899.

COLD APPLICATIONS AND ICE-MASSAGE.

ESMARCH'S treatise on "The Use of Cold in Surgery" brought this therapeutic measure prominently into notice nearly forty years ago. Among the many additions to the practical side of medicine and surgery which must be attributed to Esmarch no one was nearer to the heart of the old veteran than the application of cold as an alterative and counterirritant in inflammatory processes as well as an allayer of pain. More recently the direct application of ice and of ice-massage in appropriate cases has attracted no little attention. In an article in the *London Lancet*, April 8, 1899, Dr. Wm. Ewart, Senior Physician to St. George's Hospital in London details some very satisfactory results from the direct application of ice by rubbing. His first experience with it was in a case of extremely painful rheumatoid arthritis of the hip, in which hot applications had utterly failed to relieve the pain. Hot air-baths had been tried and abandoned as ineffectual, and applications of dry heat in the form of hot sand-bags gave only temporary relief, which was followed by increased pain. The circumstance that the pain became worse after the hot applications suggested the use of

ice. The treatment consisted in gently rubbing the hip, the gluteal region, and the painful knee with a small block of ice held firmly in the hand by means of a piece of flannel. The relief was immediate. Pain ceased very soon and after only a few minutes the patient's features relaxed and "he began to smile gratefully."

Dr. Ewart has found ice-massage of equally good service in other cases of rheumatoid arthritis and in pemphigus complicated by painful joint affections. He has proven its value as a means of relieving the severe pleuritic pain which commonly accompanies acute pneumonia of the base. In this last affection the relief of pain was immediate and the application was welcomed as a comfort. Relief is not always permanent, so that in special cases the frequency of the employment of the ice-massage will have to be arranged to suit the individual case. This method of employing ice seems promising and the approach of hot weather makes the use of ice cold applications generally much easier because there does not exist in the minds of patients and their friends during the summer so much prejudice and apprehension as to the catching of cold and production of chills.

TRENDELENBURG'S OPERATION FOR THE CURE OF VARICOSE VEINS.

THERE has always been, among general practitioners, a certain feeling of distrust of surgical intervention for the relief of varicose veins. Thrombosis and embolism have, after operation, occasionally thrust their unwelcome presence into the progress of the case to mar the convalescence and discourage the operation. In some cases the deep veins as well as the superficial set are dilated and tortuous so that seemingly successful operations often fail to bring relief. Finally the veins that enlarge in their functional endeavor to compensate for those that have been obliterated by the surgeon take on, at times, a varicose dilatation on the slightest indiscretion so that the old condition with all its annoyance recurs despite even extensive surgical measures.

Some eight years ago Professor Trendelenburg of Leipzig described a simple operation for certain forms of varicose veins of the leg which he had found very successful. As is well known in practically all cases of varicose veins of the leg if the patient be placed in a recumbent position and the leg

elevated the dilated veins at once collapse to more or less their normal size. Professor Trendelenburg pointed out that if pressure be then made over the internal saphenous vein in the thigh the patient may resume the upright position and the veins fail to refill to anywhere near the same degree as before; as soon as the pressure is removed the varices become once more distended. In all cases in which this condition of affairs obtains, where Trendelenburg's sign, as it is called, exists, Trendelenburg counseled operative intervention. His method consists in excising, between double ligatures, about an inch of the internal saphenous vein in the thigh. The rationale of the procedure is to guard the varicose veins of the leg from the pressure of the column of blood in the venous trunks above the point of entrance of the saphenous into the femoral vein.

So many operative methods had been tried for varices that the new suggestion was not received with any great enthusiasm. It has, however, been gradually working its way into clinical practice in a good many quarters. Dr. A. Pearce Gould, Surgeon to the Middlesex Hospital, England, details, in the January number of *International Clinics*, some most satisfactory results with the operation, and in the *Lancet* for April sums up his experience with the operation in fifty cases. In all of them marked relief from pain and discomfort followed the operation. The usual process of cure was a more or less rapid shrinking of the affected veins, in some cases to quite their natural size, in others to just short of that. In some of the cases thrombosis of the vein below the ligature occurred with subsequent obliteration, but in none of them did thrombosis occur above the upper ligature.

Patients were kept in bed only a week, that is, until thorough healing of the small incision necessary in the operation had taken place. In the annoyance caused the patient, the risks of infection involved, and the subsequent scarring, the operation is much more satisfactory than the more extensive or multiple excisions sometimes employed. In none of the cases in which Trendelenburg's sign could be demonstrated was there a recurrence of the varices in anything like their former condition. Even when, in the absence of this sign, recurrence took place after operation patients were well satisfied with the re-

sults because of the relief that had been afforded them.

THE DANGERS OF ANESTHESIA AND HOW TO MEET THEM.

In general the subject of anesthesia has been studied too much from an exclusively theoretical standpoint. It is not, in any individual case, an ideal heart or respiratory center that is affected, but a particular patient with an organization peculiar to himself.

Professor Schrötter of Vienna, in talking recently at the German Medical Congress, an abstract of the proceedings of which appears in this number of the *MEDICAL NEWS*, of the development of cardiac insufficiency, said that a great deal depends in the matter of cardiac hypertrophy and dilatation on the idiosyncrasy of the patient, and the congenital strength of the heart muscle. As has now become the very general fashion in Germany he ignores the influence of the cardiac nervous mechanism entirely. This, however, is too restricted a view of the subject. There are congenital differences in nerve supply, as well as muscular conditions, that come in to complicate the problem. At least one pathologist has thought that in cases of sudden death from what might be considered heart failure, or reflex inhibition, he has found a pneumogastric nerve containing less fibers than are normally to be found in that nerve. The persistent irritation of the terminal fibers of the vagus in any organ seems at times to predispose to sudden arrest of the heart through its inhibitory mechanism. Especially is this true in chronic pulmonary irritation, as is produced even by chronic bronchitis. Hearts that are liable to suffer from neurotic conditions, even apart from any organic lesion, require more careful watching than others since the irritative excitability of their reflex nervous mechanism is such as to render them especially liable to sudden nervous arrest. In a word, the precautions necessary for safe anesthesia, include not merely a cursory examination of heart and lungs for organic disease, but demand of the careful anesthetizer considerable previous knowledge of the patient's pulmonary and cardiac history to enable him to anticipate accidents. Along this line, rather than in the employment of some new anesthetic chemical compound,

must come the improvement so long looked for in the mortality from anesthesia.

ECHOES AND NEWS.

Dr. Senn for Governor of Illinois.—Dr. Nicholas Senn is declared to be a candidate for the Republican nomination for Governor of Illinois in 1900.

Christian Science Did Not Cure.—Mrs. Charlotte Bargnet, sixty-seven years old, died at Mount Vernon, New York, on May 3d. She had been suffering for three months and had not during that time received medical attention. Instead, a Christian Scientist prayed over her. Coroner Blanding of Mount Vernon has ordered an inquest.

Information Wanted by "The Jeffersonian"—*The Jeffersonian* Magazine, which is published monthly during the college year by the students of Jefferson Medical College, Philadelphia, desires to obtain a complete list of the alumni of the college and information concerning matters of personal interest to any of the members. Parties interested will please take notice.

Officers of the Association of American Physicians for 1900.—The election of officers resulted in the unanimous choice of the following gentlemen to serve for the ensuing year: President, Dr. E. G. Janeway; vice-president, Dr. William H. Welch; recorder, Dr. I. Minis Hays; secretary, Dr. Henry Hun; treasurer, Dr. J. P. Crozer Griffith; councillor, Dr. William T. Councilman.

Testimonial to Dr. McGauran.—At the last meeting of the New York Celtic Medical Society the members, through Dr. Francis J. Quinlan, who made the speech, presented to Dr. G. D. McGauran a magnificent service of silver as a testimonial of their high regard. Dr. McGauran goes to Lawrence, Mass., in consequence of his wife's health, where he will make his future home.

The New Skene Hospital.—Articles of incorporation of the society in Brooklyn known as the "Skene Hospital for Self-Supporting Women," were signed May 4th. It will be remembered that Dr. Skene resigned the presidency of the Long Island College for the purpose of assuming the management of this new enterprise. Dr. Charles Jewett has succeeded Dr. Skene as president of the college.

Special Train from New York to the Columbus Meeting.—The Committee on Transportation of the New York County Medical Association is arranging the rates, train service, etc., for the Columbus meeting of the American Medical Association to be held on June 6th, 7th, 8th, and 9th. Those intending to go and desiring to take advantage of such arrangements as may be made will kindly address, as soon as possible, Dr. Parker Syms, Chairman of Committee, 50 West 47th street.

Quinin Consumed by Americans.—The report comes from Washington that 125,000,000 grains of quinin have been consumed during the past year by American soldiers in Cuba, Puerto Rico and the Philippines. It is stated

also that Americans generally are a race of quinin-eaters, consuming as they do one-third of the quinin of the world. The drug is used in the preparation of many patent medicines, tonics, bitters, cold cures, etc., and is dissolved in rum or spirits for external use as a hair-tonic.

British Medical Fortunes.—The *Lancet* corrects an impression which seems to have existed in England to the effect that Sir William Jenner's fortune of £375,000 was earned by him in the practice of his profession. As a matter of fact, a certain portion of this fortune was derived from trade and bequeathed to him by a brother. The *Lancet* names the fortunes left by eleven eminent English physicians and considers that a first-class brewer's fortune would be expected to amount to more than the aggregate total of these eleven medical fortunes or the brewer would be accounted a comparative failure.

Christian Science Treatment for Poisoning.—Dora Eng-land, twenty-two years old, of 105 Central Avenue, Newark, died in the Newark City Hospital on April 23d. She had been suffering from melancholia for several weeks. On the day before her death she took some Paris green. Her act was not discovered until two hours afterward when her mother, a devout Christian Scientist, called in Mrs. Van Houten, a Christian-Science leader in Newark, who spent much precious time in praying over the girl, until the mother in desperation called on Dr. J. T. Wrightson, who administered antidotes and sent the patient to the hospital. His efforts, however, came too late and the patient died.

Report Concerning "Embalmed" Beef.—The report of the Army Beef Court of Inquiry, appointed to investigate General Miles' charges regarding the food-supply of the army in the late war, was made public on May 7th. It finds that General Miles' statements concerning refrigerated beef are not sustained, and that the canned beef was good and fresh when delivered. The canned beef is considered, however, unsuitable for use as a field ration. General Miles is criticized for not promptly reporting to the Secretary of War his knowledge or belief that the food was unfit and caused sickness. General Eagan was sharply criticized for purchasing such large quantities of canned beef as he did. It is recommended that no further proceedings be held.

The Laval Prize.—This prize, consisting of the interest on 3000 francs (\$600) which has accumulated between one International Otological Congress and the next, was founded by Baron Léon de Laval, of Nice, and will be awarded at the next meeting of the Congress, to be held in London, August 8 to 11, 1899. It will be presented to the author of the most marked progress bearing on the practical treatment of affections of the ear, or to the inventor of any new apparatus which is readily portable and improves considerably the hearing power of deaf persons. All persons desiring to compete for the prize are requested to communicate without delay with Mr. Creswell Baber, 46 Brunswick Square, Brighton, England, stating the facts on which their applications are based.

The Infectiousness of Colds.—The treatment of tuberculosis by fresh air and good diet is now thoroughly recognized as the most beneficial one, and everywhere sanatoriums conducted on these principles are springing up. But it should be remembered that if proper care is taken of children when young that there would not be the need of sanatoria there now is, as in many instances the seeds of consumption can be eradicated by judicious bringing up. It is a fact, both instructive and interesting, that in many of the coldest portions of the globe colds are unknown. Nansen and his men when in the Arctic regions, although they underwent exposure of every description, never suffered from colds, but no sooner had they set foot on their native shore of Norway than they one and all caught cold. The experience of other Arctic explorers is the same. It seems, then, probable that after all there is something in the theory that colds are infectious. —*Pediatrics.*

Hospital Accused of Overcharging.—The Commissioners of Accounts, in a report submitted to the Mayor of New York City on May 4th, state that the New York Post-Graduate Medical School and Hospital made heavy overcharges against the city during 1898. They recommended that the matter be placed in the hands of the Corporation Counsel. During the year 1898 there were 11,236 free-days treatment at the hospital. The Mount Sinai Hospital receives forty cents a day for free treatments and the New York Polyclinic Medical School and Hospital receives one dollar. By applying the former rate, the Commissioners find that the Post-Graduate Hospital charged \$20,505 too much, and by applying the rate paid to the Polyclinic the excess is found to be \$13,764. The Post-Graduate Hospital receives \$30,000 a year from the city, but there is no stipulated rate for free-days treatment. It would seem, therefore, that the Commissioners have no legal grounds for complaint.

Effects of Intense Cold upon Intellection.—Exposure to extreme degrees of cold has a stupefying effect upon the brain. Nearly every one exposed to cold for a long time experiences a weakening of the will power, and often a temporary loss of memory. This fact probably in its greatest measure was observed by the French in evacuating Moscow. Among the recently discovered papers of a German physician who was one of the retreating party are accounts of this retreat, in which it is stated that the first effect of the cold was the weakening of memory, which affected healthy men as well as those who had already suffered the hardships of constant exposure and extreme fatigue. When the mercury dropped to 36 degrees below zero many soldiers could not name their accoutrements. Some of them forgot the name for food and perished from starvation. Very many could not remember their own names. Others showed decided symptoms of mental derangement and later became insane.

Typhoid in Army Camps.—At the session of the Association of American Physicians which was held in Washington on May 3d, Dr. Victor C. Vaughan, one of the three physicians appointed by the War Department to in-

vestigate the cause of the typhoid-fever epidemic in military camps during the war, read a paper which may be considered a preliminary report of that board. Surgeon-General Sternberg practically endorsed the conclusions reached by Dr. Vaughan. It was held that the spread of typhoid among the troops was due almost entirely to camp pollution, and that the principal agent in the distribution of the germs was the house-fly. The army surgeons, both volunteer and regular, are criticised for erroneously diagnosing mild cases of typhoid as malarial fever, and for their aversion to calling typhoid by its right name. Thus there resulted a lack of proper precautions to prevent the spread of typhoid. In Dr. Vaughan's opinion practically all the cases reported as malaria were mild types of typhoid. This opinion is based on the uneven distribution of the cases among regiments camped side by side, the unofficial statements of regimental surgeons, the results of blood examinations, the fact that the so-called malarias did not yield to treatment with quinin and the high rate of mortality which corresponded with that from typhoid and not from malaria. It is believed that typhoid fever prevailed in ninety per cent. of the volunteer regiments before they reached the Government camps, "So widespread is typhoid fever in this country," said Dr. Vaughan, "that in assembling a regiment of volunteers the probabilities are that one or more in the regiment will be found infected with this disease." It was found that the water-supply at the various camps was generally pure and wholesome.

CORRESPONDENCE.

RELAPSES OF MEASLES.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—I have just read your article on "Second Attacks of the Infectious Fevers." The inhabitants of the village in which I live have just begun to recover from a very widespread epidemic of measles. The epidemic was of some interest, and I deem it worthy of reporting from the fact that it was very widespread throughout the village, and secondly, because of two cases of relapse similar to those reported by Felty from Vienna, which were unique in my experience, and similar incidents of which I had never heard before reading your article.

The first case I cannot vouch for since it did not occur in my own experience. I only saw the case during the primary attack. The patient was a boy of about seventeen years of age, and I saw him with a colleague during the height of the primary eruptive stage. It was a typical case of measles. I saw him no more after this, but it was reported to me that he got along nicely, made a good recovery apparently, the eruption entirely disappeared, and he was out again for about one week when the relapse occurred. The eruption returned though not so severely as at first, and he was again confined to his room.

The second case, which happened about one month after the first, and during the latter part of the epidemic, was that of a young girl about fifteen years of age. Her pri-

mary attack occurred some three weeks previous to her relapse. At that time the eruption with other typical symptoms of measles occurred. She then apparently completely recovered and went about her duties and pleasures with no indication of ill health. About three weeks after her primary attack she drank a glass of iced lemonade, and almost immediately afterward the eruption began to make its appearance on her face. It spread over her face, body, and arms, by the following day, and was accompanied by nearly all of the associated symptoms which go to make up a typical case of measles.

S. L. COLEMAN, M.D.

UNIONTOWN, ALABAMA, May 5, 1899.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

MAYOR ASHBIDGE RESCINDS HIS ORDER RELATIVE TO RESIDENT PHYSICIANS OF THE PHILADELPHIA HOSPITAL—OVARIAN CYST OF THIRTY-FIVE-YEARS' DURATION—OPERATION FOR PERFORATION IN TYPHOID FEVER—OBITUARY—HEALTH STATISTICS.

PHILADELPHIA, May 9, 1899.

MAYOR ASHBIDGE'S order that hereafter none but residents of the city shall be appointed house physicians to the Philadelphia Hospital, which service is generally regarded as the most valuable training to be obtained in this city, has brought forth such a storm of protests that he has been compelled to rescind it. What possible motive could have induced him to promulgate this it is hard to say, for neither the patients nor the city at large would have their best interests served in thus closing the doors of famous old "Blockley" to general competition. There are many drawbacks to the city's endeavor to again become the preeminent medical center of this country, and to gradually limit the number of hospital appointments is not conducive to an increase in the medical student population which is now estimated at close to 2000. It is only too well known that many of the hospitals, notably, two of the largest, the German and the Pennsylvania, make no pretence of having competitive examinations for appointment, while others do so nominally only. If the Mayor is anxious to reform the prevailing methods at Blockley he might begin by dismissing from the Board of Examiners men who hold teaching positions in medical colleges, thus giving all graduates an equal chance, which is hardly possible under the present conditions.

Complaints have been frequent that men teaching along certain lines ask questions peculiar to their individual work and views, and that these complaints are well founded can be easily seen from a perusal of the questions asked in previous years, and especially those in 1898. It is to be hoped that this much-needed reform will soon be made so that "medical-school politics" will no longer be a factor.

At the last meeting of the College of Physicians, held May 3, 1899, Dr. De Forrest Willard read a report prepared by himself and Dr. S. M. Wilson of "A Case of Ovarian Cyst of Thirty-five-Years' Duration; Patient Dying of Influenza Bronchitis at Seventy-four Years of

Age," in which Dr. Willard stated that its chief interest was in the long and unusually uninterrupted course as showing the length of time a woman can live when malignancy does not enter the case as a factor. The case was an evidence also of the conservative views on gynecology, held some thirty years ago, and it was not strange, therefore, that removal was not advised by Dr. Willard when he saw the case for the first time.

Dr. Willard tapped the cyst with relief to the woman for a period of nearly two years, when tapping again became necessary, and was resorted to quite frequently thereafter. At the post-mortem the intestines were found to be adherent to the cyst which sprang from the left ovary, and was so adherent to the belly-wall as to show how impossible removal would have been; the latter formed part of the anterior wall of the cyst.

At the same meeting Dr. William J. Taylor read a report of "Two Cases of Operation for Perforation in Typhoid Fever." According to Cushing's statistics he showed that ten per cent. of the fatalities in typhoid fever are due to peritonitis from perforation, and during the late war, ten per cent. of 2000 patients, or 200, might have been operated upon with some chance of success, but were not. Cushing's report is not strictly accurate, however, for Dr. Taylor knew of at least one soldier not mentioned, Dr. Willard's case, who had been operated upon though with a fatal result. The recoveries after operation are few, but twenty-seven per cent. is reported by Cushing as being a fair estimate. Of the two patients under Dr. Taylor's care, one was operated upon four hours, the other two hours after a diagnosis of perforation had been made. The first case occurred in a man of thirty-four who had had hemorrhages. At the time of perforation his temperature dropped from 102.6° F. to normal, his belly became distended, there was severe pain over the right side of the abdomen, liver dullness had disappeared, and his pulse was so weak as to be imperceptible. During ether anesthesia his pulse improved. A perforation in the ileum, the size of a lead-pencil, was found, and after repairing it and washing out the belly with sterile salt solution, an attempt was made to close the abdominal wound, but the patient died before this could be accomplished. Dr. Taylor's second case occurred in a man on the twenty-fourth day of the disease. The temperature fell from 103° F. to normal, pain and board-like rigidity of the abdomen were present, and liver dullness had not disappeared. After opening the belly evidences of septic peritonitis were found, and a perforation in the ileum eight inches from the cecum. The ulcer was invaginated, the abdomen washed out with saline solution and drainage instituted, but the man died twenty-one hours later from septic peritonitis.

Dr. Taylor doubts the wisdom of Dr. Keen's advice to wait for reaction, and would operate immediately after a diagnosis is made. He doubts the importance of the absence of liver dullness as a sign of perforation, but lays stress upon the importance of recognizing the preperforative stage and Finney's symptoms of pain, nausea, vomiting, and leucocytosis. He outlined the surgical technic of these operations, and stated that in his opinion the

only contraindication to operation is a moribund condition of the patient.

In the discussion which followed Dr. H. A. Hare said that he was surprised to find so much stress laid upon pain as an all important symptom, for many cases have recently been reported, especially by French physicians, in which pain was absent, and on the other hand, in many cases in which perforation has been excluded because of the absence of pain, death has been found at post-mortem to have been caused by perforation. He quoted two cases of his own in which pain was absent, and stated his belief that this is very likely to occur when the perforation is a minute opening. Dr. Hare agreed with Dr. Taylor as to the slight value to be attached to the presence or absence of liver dulness, and quoted a case where tympany over the liver was due to a distended colon. As to the preoperative stage, most physicians have all they can successfully accomplish in making a positive diagnosis of perforation after it has occurred.

Dr. Davis called attention to the difficulty of making a diagnosis of perforation before the surgeon considered it too late to operate, and cited some cases illustrative of this perplexing problem. He said he, for one, would be only too glad to know a way of determining the preperforative stage, and agreed with Dr. Hare as to the difficulty of determining perforation early.

Dr. Joseph J. Kirkbride, for more than twenty years physician in the Out-patient Department of the Pennsylvania Hospital, died last week aged fifty-seven years. He was the eldest son of Dr. Thomas S. Kirkbride, who for forty years was superintendent of the Insane Department of the Pennsylvania Hospital, or "Kirkbride's," as it was generally known. He graduated from the University in 1872, and was well known in medical and scientific circles, being a member of the Academy of Natural Sciences, College of Physicians, etc.

Another death of last week was that of Dr. D. L. Beaver, Reading's oldest physician, who died at the age of eighty-four. He graduated from the Pennsylvania Medical College in 1841, and practised continually for fifty-eight years.

The total number of new cases of contagious diseases occurring in Philadelphia during the week ending May 6th was 278, reported as follows: Diphtheria, 70 cases with 14 deaths; scarlet fever, 39 cases with 2 deaths; typhoid fever, 169 cases with 26 deaths.

OUR LONDON LETTER.

[From Our Special Correspondent.]

CONFERENCE OF FRIENDLY SOCIETIES—RESISTANCE OF RATS TO DIPHTHERIA—DEATH OF SIR WILLIAM ROBERTS—OFFICERS BETTER MEN THAN RECRUITS—RATIONALIZATION OF GERMAN SCHOOL SYSTEM—THE LONDON POLYCLINIC—LIVERPOOL SCHOOL OF TROPICAL MEDICINE—THE MODERN HIPPOCRATES.

LONDON, April 31, 1899.

THE twentieth annual conference of the Friendly Societies Medical Alliance has just been held at Leamington.

This is the dragon which has been devouring the income and prospects of the English general practitioner at such an appalling rate of late years. It is, therefore, a matter of some gratification to note that the Chairman in his address expressed regret at the clashing which had occurred between the societies and the profession in certain districts, admitted that the agents of the Alliance had been at fault in some respects, especially as regards "touting" for new members, and stated that conferences were being held with the General Medical Council for the purpose of agreeing upon a harmonious and mutually advantageous course of action.

A system of medical attendance by the year, arranged in advance, has many things to recommend it if, indeed, it be not the ideal one, and there ought ultimately to be no more difficulty in fixing a yearly fee at a fair and reasonably remunerative rate than a daily or weekly one as at present.

Our bacteriologic brethren are hard at work all along the line trying to prove that resistance is an important factor in disease, and immunity either accidental or relative. One of the latest essays in this direction is that of Louis Cobbett, who has just reported from the Cambridge Pathological Laboratories a series of studies upon the immunity of the rat to diphtheria.

After a number of careful experiments he comes to the conclusion that this well-known immunity is "only relative" and that rats succumb to the poison if only sufficiently large doses are used. But as this dose was found to be necessarily from 1500 to 1800 times the amount fatal to a guinea-pig of twice the weight, in other words, that the rat's resistance is from 3000 to 3600 times that of the "normal standard" of the laboratory, the guinea-pig, it is obvious that to call this "relative" is a mere trifling with terms. One might just as well talk of the relative immunity of the human species to bread and cheese, because 3000 pounds of the compound introduced into the system would produce fatal results.

The death of Sir William Roberts has painfully affected the whole community. Upon all hands are heard tributes to his brilliancy, charm, and nobility of character, and regrets that he could not have been longer spared. Although within a year of the traditional "three score and ten" he was still so fresh, so vigorous, so keenly alive, both mentally and physically, that had it not been for the ruthless onslaught of that cruellest foe of humanity, cancer, he might have continued in his splendid service of the profession, of the race, for at least a decade or a decade and a half longer. By a strange and bitter irony of fate he, who had devoted the better part of his life to the study of the disorders of digestion, and relieved the gnawing, gastric pangs of thousands of other men, died at last of cancer of the stomach. Born in 1830, he graduated at University College, London, and settled in Manchester for the practice of his profession. His fame grew so rapidly that in less than ten years he was invited to deliver the Goulstonian lectures at the Royal College of Physicians and was elected a fellow. His subject was the "Digestive Ferments" and the brilliant success achieved was more than sustained by his second course, a few

years later, upon "Dietetics," at Owens College, these two courses being combined and incorporated in his now classical work, "Digestion and Diet." About 1880 he came to London and a few years later gave his famous Croonian lectures on the "Chemistry of Uric Acid, Gravel, and Gout." Then came his knighthood and all the "Blue Ribbons" of the profession, one after another, the Presidency of the College of Physicians, membership in the General Medical Council, the Opium Commission in 1893, and many other honors.

A recent report of the War Office gives a most interesting comparison between the physique of the officers and that of the enlisted men. It has long been the conviction of the writer that the popular and traditional impression as to the "sturdiness" of the lower strata of society and "punyness" of the upper was utterly mistaken, and that the "better classes" were better in physique as well as in social position. The measurements given in this report fully confirm this view, as the officers, on entering the army, average two inches taller, from two to five pounds heavier, and have two to three inches greater chest girth than the recruits. And this, too, in spite of the fact that the men average nearly two years older than the officers at enlistment. Generations of "breeding" of even unconscious selection and better environment tell upon the human animal just like any other.

The German Department of Education, with its customary sagacity, has made practical application of the valuable studies of Drs. Springer and Kemsies upon fatigue in school-children and has just issued a circular laying down the following admirable rules: (1) All scientific studies and heavy work to be pursued in the morning. (2) Not more than four hours systematic work per diem and three-hours' "nooning." (3) Subjects to be taken in "fatigue order," the heaviest earliest in the day, beginning with mathematics, foreign languages, and formal sciences, and ending with geography and natural history, the last study being regarded as actually refreshing, instead of fatiguing, and capable of preparing the children for another additional study period.

The formal opening of the Liverpool School of Tropical Medicine occurred on April 22d. Lord Lister presided and Sir Wm. Broadbent, Michael Foster, Clifford Allbutt, Sims Woodhead, and other celebrities were present. The school has been fortunate enough to secure, as its chief lecturer, Major Donald Ross of "mosquito" fame, and already has an income assured to it, chiefly by private subscription, of £1600 a year.

Meanwhile the Government bantling is preparing to climb into the marsupial pouch of the dear public and announces the receipt of two superb Royal donations of £200 from the King of the Belgians, and £1000 from the Secretary of State for India. So that the gap to be filled by private charity is now only \$59,500.

The first clinical demonstrations at the new Polyclinic were held last week and were attended by some eighty or ninety practitioners and twenty consultation patients. The formal opening will be held May 1st and the lectures and laboratory work will begin two days later.

The death is announced of a prominent member of the

profession, who is better known by his work than by name, Dr. Jukes de Styrap, author of the famous "Code of Medical Ethics."

The Government has at last announced its intention of bringing in an amendment to the Factories Act, restricting the use of lead glazes in accordance with the recommendations of Professors Thorp and Oliver, given in a former letter. So a check is at last to be placed upon the disgraceful "saturnalia" of the English potteries.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

A NEW OPERATION FOR EXOPHTHALMOS—TREATMENT OF CONGENITAL TORTICOLLIS—CARE OF INFANTS DURING WEANING—OPERATIONS UPON THE INSANE—A NEW METHOD OF RESECTING THE SUPERIOR MAXILLARY NERVE—ON THE USE OF COLD BATHS IN MENINGITIS—RHEUMATISM OF THE SACROILIAC SYNCHONDROSIS—POISONING FROM ORTHOFORM AND FROM ANTIPYRIN—AN ATTACK OF SYPHILIS IN A MAN WHO HAD HEREDITARY EVIDENCES OF THE DISEASE.

At the Academy of Medicine, April 4th, CHAUVEL discussed a new operation for exophthalmos which has been brought forward by Roure. The conjunctiva is divided around the cornea, separated from the sclerotic, and brought together above the cornea by a purse-string suture. Some days later, when adhesions have formed between the conjunctiva and the sclerotic, the redundant portion of the conjunctiva is cut off. As a result of this operation in rabbits there was a considerable amount of exophthalmos. As exophthalmos is only a symptom, the operation would seem to have little application in man, except in those cases in which the eye has been displaced forward as a result of a traumatism.

At the meeting of April 11th, BERGER spoke of the treatment of congenital torticollis. He presented a patient ten years of age, upon whom he had performed section of both heads of the sternomastoid muscle, following the operation by massage and molding exercises, flexion of the head, twisting of the neck and pressure on the spine with the child in dorsal decubitus or suspended, until the torticollis had been completely overcome and the curvature of the spine almost entirely so. He laid stress upon the importance of the after-treatment in such cases. The trouble was due to a traumatism of the neck during delivery. The presentation was a pelvic one, and there was noticed upon the right side of the neck, some days later, a swelling, which disappeared little by little, leaving a vicious position of the head, which increased until the child was in the condition above referred to.

PINARD said that congenital torticollis was due to a hematoma in the muscle followed by retractions, which brought about the deformities. The real cause is, therefore, not congenital, but is the traumatism of the muscle produced during delivery. If this is recognized and treated at once the unfortunate consequences may be avoided. The speaker mentioned five cases in which orthopedic treatment was immediately instituted, and in which as a consequence the extreme contraction was prevented.

SAINT-PHILIPPE said that weaning is a period of danger for most children, because it is usually badly carried out, so that gastro-intestinal dyspepsia with diarrhea frequently results. Milk is often badly borne, and if so, it should be suppressed entirely and its place be taken by barley-water, thin gruels, or albumen-water, with a little brandy. At the same time massage of the whole body should be practised. Gradually the child is to be transferred to a more solid diet, and the system strengthened by warm salt baths, injections of salt solution, inhalations of oxygen, and the fresh-air cure.

At the Surgical Society, March 29th, PICQUE said that operations ought not to be performed upon insane persons unless there was a strong probability that a decided benefit would follow. Experience had shown him that 88 per cent. of the female insane had some form of genital trouble, and in many instances the relief of that lesion exerted a favorable effect upon the mental condition of the patient. He cited cases in which the melancholic delirium of a patient entirely disappeared after the removal of an ovarian cyst. In instances of this character the mental affection had accompanied or followed the lesion of the body, and the latter was known to the patient. In other patients the mental trouble had preceded the knowledge of the surgical condition, but the latter had aggravated the former. In such cases a cure of the mental malady may also follow surgical intervention. In a third group of cases the convalescence from a mental difficulty was hindered by a metrorrhagia, or profuse leucorrhoea, etc. The relief of the latter condition hastened the recovery from the mental disorder. There are also well-marked cases of mental disease, in which the existence of pelvic disturbance is unknown to the patient, and unassociated with her delirium. In such cases the cure of the surgical lesion may have no effect upon the condition of the mind. Picque operated upon 17 insane persons and 1 hysterical one, and treated 4 others without operation. Of these 22 patients, 12 recovered entirely, both mentally and physically; 6 were benefited, 3 were not improved, and 1 died as a result of operation.

At the session of April 12th, POIRIER described a new method of reaching and resecting the superior maxillary nerve. Examination of fifty skulls, and numerous dissections showed him that the pterygo-maxillary fossa, through which the nerve runs, is always a little above the level of the zygomatic arch. His plan was, therefore, to enter this fossa by an incision made wholly above the arch so as not to cut away any portion of it. He advocated resection of the nerve, and not its avulsion, as less likely to cause subsequent neuralgia.

At the Medical Society of the Hospitals, April 7th, RENDU related the history of a young man who had died of cerebrospinal meningitis. At autopsy the sulci of the brain were filled with a thick yellow pus, almost like butter, containing in great numbers cocci in short chains. As death approached the symptoms were well marked. The head was thrown back, there was photophobia, and a constant incoherent delirium without convulsions; but in the early part of the illness, when the symptoms were those of stupor, headache and cervical pains, and diar-

reha, the case was thought to be typhoid and the patient was treated with cold baths, which were ill borne.

NETTER said that it is rare to find a streptococcus in cerebrospinal meningitis. He knew of only two reported cases. It is the rule that cold baths are not well borne, according to his observations. Warm baths on the other hand, at 38° to 40° C. (100° to 104° F.), are acceptable to a patient with cerebrospinal meningitis, and relieve the pain and contractions. They should be given three times in twenty-four hours.

At the session of April 19th, GALLIARD mentioned three cases of rheumatism of the left sacroiliac articulation. In one patient the rheumatism preceded a pneumococcic meningitis without pneumonia; in the second case it developed after an intestinal paresis which followed typhoid fever, the rheumatic pain existing along the vertebral column, as well as in the joint; while in the third case the rheumatism was gonorrheal and lasted four weeks, with pains along the sciatic nerves.

At the Society of Dermatology and Syphilography, April 10th, BROcq mentioned some accidents which followed the use of orthoform. He applied a solution of this drug for the relief of prurigo, and found that it produced in one case an active irritation of the skin. In another patient an ointment containing 5 per cent. of orthoform produced an eruption which lasted fifteen or twenty days, and was accompanied by considerable dermatitis. He dusted orthoform over the vulva and between the thighs of a young woman and produced not only local irritation, but a well-marked eruption of infiltrated nodules upon the face, body and limbs. In an infant he had observed symptoms of intoxication follow its use.

FOURNIER mentioned two cases of swelling of the end of the penis, with large discolored blotches due to the use of antipyrin.

JULIEN saw a young man of twenty-two years, with a chancre on his penis and a secondary syphilitic eruption obtained from coitus with a syphilitic woman. The patient presented numerous evidences of hereditary syphilis, such as absence of the nails, chronic glossitis, affection of the eyes, etc. His father had contracted syphilis six months before marriage, but his mother remained free from the disease.

SOCIETY PROCEEDINGS.

THE SEVENTEENTH GERMAN CONGRESS OF INTERNAL MEDICINE.

Held at Carlsbad, April 11 to 15, 1899.

(Specially Reported for the MEDICAL NEWS.)

THE President, PROFESSOR QUINCKE of Kiel, opened the Congress, after which Count Condovene, Governor of Bohemia, delivered a short address of welcome.

The first paper, entitled "Insufficiency of the Heart-muscle," was read by VON SCHROETTER of Vienna. He said that the reserve energy of the heart is of congenital origin, and on the amount of this depends the prognosis in valvular disease. With a functionally strong muscle, valvular disease may be borne for years without symp-

toms, but if the reserve force is small, insufficiency may manifest itself even when no anatomical lesion can be discovered. Moreover, as the heart experiences no feeling of weariness, it happens that many "who employ their muscles too much and their intellect too little" in the different sports realize only too late the irreparable injury to the heart-muscle. On account of its wonderful power of compensation the heart finally answers the increased demand and hypertrophies; but this is a pathologic condition, and always remains such, leading sooner or later to complete exhaustion of the organ. Besides an insufficiency due to overwork of a congenitally weak muscle, the speaker recognized one due to nervous causes, manifesting itself usually in tachycardia. He illustrated this by a clinical example of what is ordinarily called "broken heart." A woman, aged thirty years, felt so deeply the loss of her husband that her only wish was to follow him. Although up to this time she had been perfectly healthy, she now began to decline, developed symptoms of heart weakness, tachycardia, etc., and after a short period died.

MARTIUS of Rostock considered fatty infiltration and degeneration of the heart muscle less serious than ordinarily assumed. He insisted that the impulse of the heart against the chest wall takes place during closure of the valves. He called attention to the fact that normal, healthy youths show little or no apex impulse, while feeble hearts frequently produce a diffuse, well marked one. From this he concludes that the normal heart works without friction, that is, without striking the chest wall.

SCHOTT of Nauheim dealt especially with chronic heart disease of youth. He called attention to the common difference of the seat of lesion in youth and old age; in the latter period arteriosclerosis leads to affection of the aortic valves, while in youth these are rarely diseased. For treatment he employs baths, suitable diet, and regulated exercise.

HIS of Leipzig regretted our lack of knowledge in regard to the nervous mechanism of the heart. He described an unusual phenomenon that he recently observed: For about forty seconds the ventricles ceased to beat, the heart-sound, the impulse, and the pulse disappearing, but a rhythmical sound was evident over the auricles, and a venous pulse noticeable in the neck. The ventricular contractions returned, but the contractions of the auricles continued more frequent for some time.

POEHL of St. Petersburg described the products of cardiac exhaustion as belonging to the xanthin group, but said they are more readily oxidized. In some cases of heart disease the urine is excreted under a reduced osmotic pressure, and it is possible that mineral waters may increase this and so relieve the heart.

"Leucemia and Leucocytosis" was the title of a paper by LOEWIT of Innsbruck. He described two forms of ameba which he had discovered in the blood of leucemic patients, and which he considers to be the cause of the disease. The one found in myelogenic leucemia he designated "hemameba leucemia magna"; that of lymphatic leucemia, "hemameba leucemia vivax." Though unable

so far to cultivate these parasites, he has succeeded in inoculating lower animals with the disease, the animals dying after several months with all the symptoms of the disease, associated with the invariable presence in the blood of the micro-organisms. On the ground of the parasite being an ameba he recommends a trial of quinin in leucemia, though his own experience with it is too slight to form conclusions.

MINKOVSKI of Strassburg regretted that so little is known of the connection between the chemistry of leucemia and its clinical symptoms. Renewed interest has lately been developed in the study of the formation of uric acid on account of the increase in leucemia and leucocytosis. The value of therapeutics has become more evident in the study of leucocytosis, since it is possible by different tissue extracts, products of bacteria, and drugs to increase or diminish the number of leucocytes. It will not be long before Virchow's saying of fifty years ago, "I demand a place in pathology for the colorless corpuscle," will also apply to therapeutics.

GOLDSCHIEDER of Berlin spoke of the importance of Löwit's discovery, but doubted the facts. GRAWITZ of Berlin reported some interesting experiments on leucocytosis in animals. KUEHNAM of Breslau described some renal changes in leucemia. KRAUS of Gratz said that he had observed in his cases of leucemia an increase in the fibrin factors of the blood. LOEWIT closed the discussion by saying that he had not given his methods for staining and inoculation in detail because they would shortly be published, and from the publication there would be less likelihood of misquotation and error. (At the beginning of the afternoon session he demonstrated the hemamebæ microscopically. They were situated within the leucocytes near the wall, and were stained red, while the cell itself was counter-stained blue.)

The next paper, on "The Diagnosis and Treatment of Aortic Aneurism," was read by SCHMIDT of Frankfurt. He insisted that not enough stress had been laid on the Oliver-Cardarelli symptom "tugging" as an early sign, and also recommended the habitual use of the Röntgen-rays. Out of 54 cases that he had observed, 52 of which were in men, he found evidence of syphilis in but 16. In certain parts of Bavaria, he said, where women do the physical work of men, aneurisms are as frequent as among men. In the way of treatment he advised potassium iodid, rest in bed for about eight weeks, and the "starvation diet" recommended by Tufnell thirty years ago. In this dietary the food is cut down one-half, and water limited to 350 grams daily.

HAUSEMANN of Berlin stated that in sixty-four cases of aneurism in which he performed the autopsy he had found evidence of syphilis in but 12.

SENATOR of Berlin believed the Röntgen-rays necessary only in aneurisms of the descending aorta. He detailed a case in which he was following a French method, namely, injecting into the sac solutions of gelatin.

QUINCKE of Kiel thought that the connection between syphilis and aneurism, in view of the success attending the potassium-iodid treatment, is greater than the previous speakers had admitted.

CZERNY of Breslau in a paper on "Hyalin Degeneration," said that it results from the destruction of cell protoplasm. It can be produced artificially by inducing suppuration. In cases of cachexia it changes into amyloid material, and in these cases may also be carried in the circulation and deposited in and around the blood-vessels, especially of the brain.

In a paper on "Diseases of the Gastro-intestinal Tract" EWALD of Berlin described a form of appendicitis coming on with general gastro-intestinal disturbances without any local symptoms whatever. He detailed a case treated as hysteria for more than a year. The patient was finally operated on by Sonnenburg, who found adhesions, ulceration, and suppuration about the appendix.

PETERSON of Heidelberg gave the indications for surgical interference in cases of non-malignant disease of the stomach. ESCHERICH of Gratz and JACOBI of Berlin spoke on the virulence and peculiarities of the bacillus coli communis.

VAN NOORDEN of Frankfort, in a paper on "Diseases of the Kidney," insisted strongly against the common treatment of contracted kidney. He said that diets of milk and alkaline mineral waters tend only to overload the already diseased blood-vessels and oppress the heart.

In a contribution on "The Origin of Fat" ROSENFELD of Breslau claimed that carnivora possess very little fat because they practically only get whatever little happens to be on the meat, and albumen is not convertible; that ruminants, on the contrary, show much more fat, the carbohydrates being changed into fat. The fat of different animals differs in accordance with the kind of fat consumed and from what produced. Fish can be made to take on mutton fat by feeding it to them for a long time. He, therefore, believes that human fat, too, differs according to its mode of origin, the fat of the Eskimos giving the characteristics of fish fat, and that of Polynesians those of cocoa butter.

"A New Micro-organism for Syphilis." A paper with this title was contributed by NIESSEN of Wiesbaden. He has cultivated a bacillus from the blood of syphilitics, the inoculation of which, he claims, into monkeys and pigs produces symptoms similar to those seen in the human being, namely, a peculiar rash of the skin and mucous membranes, swelling of the lymph glands, and finally fatal disease of the nervous system.

SPITZER of Breslau, in a paper on "Uric-Acid Formation," claimed that his investigations point to the fact that uric acid is not produced in the muscles, connective tissue, or the kidneys, but probably in the liver or spleen.

WIENER of Prague and JACOBI of Berlin said that independently of one another they had reached the same conclusion.

In a paper on "Tetanus Serum" BLUMENTHAL of Berlin mentioned his earlier denial of the efficacy of tetanus serum. Experiments in the meantime, in which he had injected the serum directly into the brain, or into the cerebrospinal fluid of goats afflicted with the disease without effect, have strengthened his former opinion.

On the vote for the president for next year, Von Jaksch of Prague proved the choice of the Congress.

THE ASSOCIATION OF AMERICAN PHYSICIANS.¹

Fourteenth Annual Meeting, Held at Washington, D. C., May 2, 3 and 4, 1899.

FIRST DAY, MAY 2D.

THE meeting was called to order by the President, DR. G. BAUMGARTEN of St. Louis, who opened the proceedings with the following introductory address:

In opening this fourteenth session my first impulse is to express to you my appreciation of the high honor you have conferred upon me. I can only excuse my acceptance of this office by my literal faith in the words of your first president, when he spoke of this Association as one in which no one will care who are the officers and who are not, and by the loyal interest I take in its welfare.

This Association was founded as one of a number of special societies cultivating special branches of medicine and it stands for specialization, subdivision of labor, and concentration of effort on the part of the investigator and clinical observer, but it differs from our allied sister societies in that it counteracts the disadvantages of specialization by allying the clinician with the pathologist, the bacteriologist with the chemist, and thus prevents one-sided devotion to mere technical training.

We count among our members those who direct their labor and acumen to the quest of the most intricate details, as well as the master minds who, trained in the appreciation of the smallest factors, yet survey all that upon which the light of science shines from a vantage ground.

It is incumbent on me to make the formal announcement that since last we met we have lost one of our master workers, Dr. William Pepper. This body, which owes so much of its early success to the tactful organizing efforts of Dr. Pepper, mingles its sorrow with that of the profession of all America, with the university and with his native city. He was one of the organizers to whom this Association owes its existence, and we remember with gratitude the kindly influence of his presence among us, one of the most interested of our members, ready in discussion, lavish of instruction, always competent and willing to give more than he received. May the Association long be spared another such loss!

The first paper, entitled

IDIOPATHIC DILATATION OF THE COLON*

was read by DR. J. P. CROZER GRIFFITH of Philadelphia. He said in part: Cases of dilatation of the colon may be divided into three classes: the acquired, the congenital, and the idiopathic congenital. In the first class I would place those cases that are due to habitual constipation, fecal impaction, acquired atony due to a debilitated system and narrowing of the bowel by pressure. In the second class may be included those cases due to congenital obstruction, or stenosis of the colon or rectum which causes distention to develop above it, and in the third class are the so-called idiopathic congenital dilatations which are dependent upon no discoverable organic

¹ All papers marked with an asterisk (*) will be published in full in the *American Journal of the Medical Sciences*.

cause. A synopsis of all the reported cases of idiopathic dilatation will be appended to the paper, and I wish to give the notes of one case which has been under my own observation. R. S., born in June, 1894, and two years and eleven months of age at the time of the examination. He had been constipated from birth and very strong purgatives were required. When five months old marked distention began in the abdomen accompanied by more or less pain. He would sometimes go as long as a week without any movement and then have a diarrhea which was at times accompanied by even an increase in the gaseous distention of the abdomen. The condition persisted without change until November, 1896, when, because of his having swallowed a button the purgatives were discontinued for a week, and after this it was almost impossible to secure a movement of the bowels. Then a severe diarrhea set in, the patient's condition steadily grew worse, and though colotomy was performed his strength had diminished so much that he did not recover. Autopsy showed nothing abnormal in the abdomen except a constriction in the ileum.

In a few cases diarrhea has been a constant feature and not infrequently has it been a final event in the history of the case. As a rule, pain and tenderness have been absent, and the presence of hard fecal masses has been the exception. The treatment should be, first, hygienic and medicinal, and secondly, operative. For the latter purpose, colotomy, or resection of the bowel as suggested by Treves, may be resorted to.

THE RELATION OF IDIOPATHIC DILATATION OF THE COLON TO PHANTOM TUMOR*

was the title of a paper by DR. R. H. FITZ of Boston. The descriptions of such tumors show marked variation in their shape, size, duration, and in the nature of the associated symptoms. It is noteworthy in the history of the subject that of late years reports of cases of phantom tumor have almost wholly disappeared from medical journals. In the meantime a considerable number of cases have been published, the characteristics of which simulate those of phantom tumor, but the tumor proved to be a permanent enlargement of the colon. The affection is a cause of deformity, discomfort and danger. It occurs both early and late in life. The former variety is frequently called congenital, though the term infantile is more comprehensive, since a recognizable congenital cause occurs only in the few instances in which a malformation of the lower part of the colon or rectum has been found. It is considered probable that constipation is the chief factor in the production of idiopathic dilatation, both in the infant and in the adult. The two conditions, chronic phantom tumor and idiopathic dilatation of the colon, are considered identical. The symptoms are similar; in each the tumor subsides under anesthesia to return when consciousness is recovered, and the phantom tumor, after laparotomy, has proven to be a dilated colon. The phantom tumor has no necessary relation to hysteria and idiopathic dilatation of the colon may occur in neurasthenic or hysterical persons. Finally cases of phantom tumor in medical journals have been replaced by examples idiopathic dilatation of the colon. The resection of

the dilated sigmoid flexure is advocated in those cases where the condition has existed for so long a time as to indicate a permanent enlargement, and especially when associated with serious discomfort or suffering. Instances are given of the successful performance of this operation.

DR. OSLER: In the first of my cases the operation of colotomy was performed by Dr. Halsted and it is erroneously stated in Rotch's "Pediatrics" that the child died later. When last heard from the child was still alive. In a second case the operation for artificial anus was performed, all the symptoms disappeared and the child improved rapidly. In a third case I reported, a child aged seven months, lived for two years subsequently, and, at autopsy we found enormous dilatation of the colon with narrowing of the sigmoid flexure.

My fourth case illustrates that this condition sometimes disappears spontaneously. The boy, aged ten years, had great distention of the abdomen with perceptible sacculations. He had chronic heart disease and with the aggravation of this and the development of ascites the dilatation of the colon disappeared.

The very rapid improvement in the patients after colotomy, leads me to believe that the operation should be performed early and that it is much less serious than the operation proposed by Treves.

DR. JACOBI: In considering the cause of this condition I may suggest that there are in the intestinal tract possibilities of imperfect development of the muscular layers. I have not seen that condition of things in the intestine, but have seen it in the stomach where there was a local atrophy of the muscle and I can imagine that a similar condition in the colon would give rise to dilatation. Further autopsies will teach us more about it.

DR. JAMES TYSON of Philadelphia then reported a case of

PRESYSTOLIC MITRAL MURMUR ASSOCIATED WITH SYSTOLIC TRICUSPID MURMUR AND JUGULAR PULSE.

The patient was a woman, aged thirty-two years, and when first seen was in the eighth month of pregnancy. There was a history of illness eight years before, during her first pregnancy, and shortly after that an attack of rheumatism, apparently muscular. Following this she has had a winter cough and three months ago is said to have had pleuropneumonia from which she never entirely recovered. Since then she has been having an aggravated cough with dyspnea, weakness and loss of weight. On admission to the hospital her appearance was that of a consumptive, but physical examination showed only general bronchial catarrh. On inspection a jugular pulse was recognized coincident with systole of the ventricles and there was marked systolic thrill at the apex, which was in the fifth interspace, about an inch to the left of the mid-clavicular line. Auscultation gave at the apex a short, rough murmur, terminating abruptly in a loud, thumping, first sound, followed by a faint second sound and when the stethoscope was carried up into the pulmonary area the second sound became more intense and again less loud as the aortic area was approached. The presystolic murmur was a double one and the thumping sound was well heard in the axilla but less loud in the mitral

area. It was also heard at the angle of the left scapula behind. Just across the left parasternal line was a long, loud, blowing systolic murmur, most intense in the fifth and sixth interspaces. Nowhere and at no time was a mitral systolic murmur audible.

The patient was relieved of the bronchial catarrh by the use of potassium iodid and belladonna, and the extreme cardiac distress was diminished by hypodermic injections of morphin. When she went in labor cyanosis became very intense, and she had to be rapidly delivered by forceps. She was examined soon after labor with the following result: the jugular pulse had disappeared, the liver could be distinctly outlined, the presystolic thrill was still plain, and the pulmonary second sound strongly accentuated. The changes noted were due simply to recession of the diaphragm and subsidence of venous turgor, which followed emptying of the gravid uterus.

DR. JANEWAY: I have found that the presystolic mitral murmur in about one-third of all cases can be heard behind, near the angle of the scapula. This is opposed to the rule usually stated. Anyone who has had a great deal of hospital experience has watched cases of mitral stenosis with well-characterized murmurs and has had those cases go out of the hospital, to return again later as cases of mitral insufficiency and much uncertainty has been brought about in this way, but when the autopsy was held a mitral stenosis was found where the last clinical history gave mitral insufficiency.

DR. GRIFFITH: I am very glad to hear Dr. Janeway speak as he has, for I made this point in a paper read here three or four years ago. No reference to the fact is made in the text-books, that in cases of mitral stenosis the murmur can so frequently be heard much beyond the ordinary limits.

A CASE OF MITRAL STENOSIS WITH FEVER (NON-MALARIAL) OF RELAPSING TYPE*

was reported by DR. F. P. HENRY of Philadelphia. He said: My patient was a young, unmarried woman, pregnant, highly chlorotic, with well-marked, though well-compensated mitral stenosis and fever which might be styled recurring, relapsing, or intermittent, but certainly not malarial. Inference that the fever was dependent upon the heart lesion is based upon the fact that no other cause could be found. About ten days before admission she began to feel weak and complained of headaches, pain in the back and neck, with occasional nausea, vomiting, and epistaxis. The menses had been suspended for two months. Physical examination revealed nothing abnormal except a presystolic murmur followed by the short, sharp first sound and a scarcely audible second sound. The heart was but little, if at all, enlarged. The temperature was normal for five days, when it began to rise, and two days later reached 101.4° F. The next day it was again normal, and remained so for six days, when it suddenly rose to 102° F. Six days later there was another ascent to 102° F., and this was repeated several times. On two occasions the rise in temperature was accompanied by a chill. Repeated examinations of the blood for the malarial organism gave negative results. Blood count showed red

cells, 2,705,000 per cm.; leucocytes, 6000; and hemoglobin, 20 per cent. Urine was normal. The patient is living and free from fever, but that is not sufficient reason for believing that the fever was not etiologically connected with endocarditis.

DR. JOHNSTON: It seems to me the explanation of these cases must be found in what we know to be the cause of analogous conditions in malarial fever, or tuberculosis, namely—in the life history of an organism. I have recently seen a somewhat similar febrile case without the cardiac symptoms, and repeated examinations of the blood threw no light upon the condition.

DR. BOND: I would like to suggest that possibly this may be due to gastro-intestinal trouble.

DR. HENRY: There were no gastric disturbances at all.

The next paper, on

THE IMMEDIATE AND REMOTE EFFECTS OF ATHLETICS UPON THE HEART,*

was read by DR. ALFRED STENGEL of Philadelphia. He said, in part: For six years past I have been making examinations to determine the effects of athletics upon the size and efficiency of the heart and character of the circulation. The charts I shall exhibit will illustrate the changes in the outline of the heart as obtained by percussion, and auscultatory percussion, after exercise. It seems that in the beginning of exercise there is a temporary increase of the cardiac pressure and the phenomenon known as "second wind" is explained by recovery of the right ventricle after the preliminary over-distention incident to exertion. The details of a number of cases may be given to show that unfortunate results may occur from violent excessive exercise in young persons not under proper training, and also to show that there is a marked difference between those who are carefully and those who are insufficiently trained. There is more or less danger attending any sport, but I would lay stress upon the necessity for careful athletic training, not only for the athletic field, but for the general struggle of life. The effect of continued indulgence in severe sports is the development of some cardiac hypertrophy, and athletes who have thus enlarged their hearts frequently suffer symptoms of over-compensation, at least during some years after they have ceased to follow athletics.

I would suggest rigid medical supervision in college athletics and that young men be encouraged to continue some form of exercise after discontinuance of regular athletics.

DR. FOLSOM: From the cases I have seen I am inclined to think that a great many of the bad effects come from one of two causes: either a young man enters into athletics without a very good heart, or more commonly still these young men with big frames and strong muscles, but unaccustomed to severe muscular exercise, go into athletics without realizing that it is easier to strengthen the muscles of the legs and arms than the muscles of the heart.

DR. OSLER: I would emphasize one point in Dr. Stengel's paper, that is, the frequency with which he has found a systolic murmur in the pulmonary area of healthy

young athletes. I hope that statement may sink deeply into the minds of the gentlemen composing the army and navy board. Every year I have two or three young fellows come to me because they have been rejected by these boards upon the discovery of such a murmur, and such rejection is often an injustice. I would also like to issue a warning to men who have about crossed the line of forty to forty-five against trying to ride bicycles and climb hills with the boys. So long as they ride with men of their own age all right, but when they attempt to climb hills with young athletes look out for trouble.

DR. DOCK: It is not sufficiently borne in mind by many that athletes with apex murmurs may be capable of a large amount of hard work. I have noted this both in the case of football players and in some of the soldiers enlisted for the late war.

ON THE INTERPRETATION OF PULSE TRACINGS

was the title of a paper by DR. A. R. CUSHNY of Ann Arbor, Michigan.

When the dog's heart is exposed, and the ventricle is stimulated with single electric shocks, each stimulus that falls during the non-refractory period is followed by an abortive systole, which is sometimes sufficient to cause a distinct pulse in the arteries, but often fails to do so. The auricle is not affected by the stimulus and continues to beat in its usual rhythm. The next contraction of the ventricle after the abortive systole is induced by an impulse descending from the auricle as usual, and, therefore, takes place at the exact time at which a contraction would have occurred had there been no abortive systole. The interval between this beat and the last normal one is, therefore, exactly double the pause between two ordinary contractions. If a sphygmographic tracing be taken, the pulse appears to miss one beat, and the intermission is found to be exactly twice as long as the interval between two ordinary elevations of the tracing. If the auricle be stimulated instead of the ventricle the result at first appears the same, the ventricle contracts prematurely, owing to the artificial impulse descending from the auricle, and there is either a very small undulation in the sphygmographic tracing or a complete intermission. If the duration of this intermission be measured, however, it is found to be less than double the pauses between two ordinary pulsations. In this way the examination of the sphygmogram of the dog enables one at once to determine whether the stimulus was applied to the ventricle or to the auricle, for in the first place the intermission is exactly twice as long as the ordinary interval between two pulses, while in the second place it is invariably shorter. Some consideration will show that the first proportion is true for any intermission of the pulse that is due to disorder of the ventricle only, that is, such an intermission must be equal to twice the ordinary pause. Any intermission that is of shorter duration must accordingly be due to the disordered action of the parts of the heart above the ventricle, which determine the pulse rhythm.

In cases of heart disease hitherto examined the sphygmogram very often showed intermissions, which indicated that the ventricle alone was at fault, while in many others it was perfectly certain that the intermission was due to

disorder of the rhythmic parts of the heart. In some cases the pulse was so irregular that no certain conclusions could be drawn in the matter. The accurate measurement of the pulse-tracings in irregularity of the heart thus affords a means of diagnosing with considerable probability whether the ventricle or the rhythmic part of the heart is at fault.

DR. M. ALLEN STARR of New York, then read a paper on

TABES.

Only two sets of neurons appear to suffer in this disease, namely, the sensory elements of the optic apparatus in the brain and the sensory elements of the spinal cord, whose primary centers are the posterior spinal ganglia and whose double branches extend to the surface of the body in the peripheral nerves, and to the medulla oblongata through the posterior columns of the cord. While in the ordinary disease the spinal and optic neurons seem to be the ones most vulnerable they are by no means uniformly involved together. In 300 consecutive cases of tabes optic atrophy was present in thirty only, and in twenty-five of these cases blindness was present many years before any other symptoms of tabes, except knee-jerk, developed. In fact, the cases in which optic atrophy is an early symptom rarely present the typical symptoms or the usual course of the disease. This leads me to separate the spinal type of tabes from the optic type, and to consider them both as degenerative diseases of the sensory neurons, but not the same disease. In the spinal type optic atrophy may appear late, and in the optic type spinal symptoms may eventually develop, but in their mode of onset, origin, and course, these diseases seem to be distinct from each other. This necessitates the careful study of each case in order to determine the proper treatment.

I want to call attention to the general anemic ill-nourished condition of these patients and direct special attention to treatment for building them up. Even admitting that from sixty to seventy per cent. occur in individuals who have had syphilis I consider it most important to begin with the tonic treatment, and to defer the use of mercury and the iodids until the patient is in a better condition for their administration.

DR. SINKLER: There is no question that attention to the nutrition is of great importance in these cases, but the best results I have seen followed removal to a different climate, especially a mild climate like that of Florida or California.

DR. THOMSON: I fully endorse Dr. Starr's method of treatment, especially the use of cod-liver oil, but in certain cases I find it useful to apply the actual cautery to the spine. Another favorite measure of mine is the red-pepper pack.

DR. FOLSOM: In regard to the use of the iodids it seems to me important to begin them as soon as possible, and I believe they are of service in the building-up process.

DR. BOND: I agree with the last speaker, for usually these patients tolerate the iodids very well.

DR. CAREY: Perhaps it may not be inappropriate to

make a suggestion as to the time at which iodids should be given. I think it is a common practice to give the iodid on a full stomach, while as a matter of fact the iodid of potassium should be given without any liability of its coming in contact with starches and should, therefore, be given one or two hours after meals.

DR. JANEWAY: Last year I spoke of the treatment of chronic syphilitic fever by the mixed treatment, that is, moderate doses of the iodid, from 5 to 20 grains, with $\frac{1}{32}$ to $\frac{1}{16}$ of a grain of mercuric iodid, and the tincture of cinchona. I have been using this also in some cases of tabes with good results.

DR. STARR: I believe that antisiphilitic treatment is indicated in most of these cases, but I believe the most benefit is derived from first building up the general health.

KERNIG'S SIGN IN MENINGITIS*

was the title of a paper read by DR. J. B. HERRICK of Chicago.

KERNIG in 1884 described a phenomenon which he thought was found only in affections of the pia mater and which was never lacking in inflammations of that membrane. If a patient with meningitis be made to sit up as on the edge of the bed, the thigh being, therefore, at right angles to the body, it is found extremely difficult to extend the leg because of the presence of a marked flexor contracture.

My own observations have been made upon nineteen cases with six autopsies. Kernig's sign was present in seventeen, and in the two cases in which it was absent a single examination was made only a short time before death and it was noticed at the time that there was a general laxity of all the muscles. In most of the cases the sign was not necessary to the diagnosis but in some it was of considerable value. In twenty-five healthy individuals examined, this sign was not found in any case and in one hundred patients ill from other conditions than meningitis it was present in two, absent in ninety-eight. It would seem then to be as pathognomonic as rose-spots in typhoid or murmurs in endocarditis.

ON ASTASIA-ABASIA, WITH A CASE,*

was read by DR. J. C. WILSON of Philadelphia.

This is the tenth case reported by American writers. The patient was a woman, twenty-four years of age, whose family history showed on the paternal side an epileptic uncle and an aunt addicted to the use of morphin, while on the maternal side were two uncles, dipsomaniacs. Some closer relatives showed nervous tendencies. On January 16th she was aroused from sleep by ringing of the door-bell and received an indifferent telegram. The next day on attempting to rise she found it impossible to stand or walk. She described her condition in the following terms, "My left leg feels as if it were made of cotton," an expression already recorded in other cases and "I feel like a combination of a child learning to walk and a drunken woman." There are abrupt movements of flexion of the knees, followed by rapid extension and contortions constituting compensatory movements of the upper extremities in order to obtain equilibrium. On attempting to stand her

knees bent and she would sink to the floor. Careful examination in every way failed to throw any light upon the condition. Treatment consisted in rest in bed, valerianate of zinc, in 1-grain doses, four times daily, and massage with electricity to the legs and feet. At the end of two weeks when allowed to get out of bed she was given lessons in walking. Improvement was rapid, but in a short time distinct hysterical manifestations appeared and she had to be isolated again, so I look upon the condition as a symptom of hysteria.

A CASE OF FAMILY PERIODIC PARALYSIS*

was reported by DR. J. K. MITCHELL of Philadelphia. He said: The case I wish to report is that of a boy, aged eighteen years, who has attacks of paralysis occurring at frequent intervals. He may retire perfectly well, but awake in the morning helpless, paralyzed from head to foot with total abolition of skin, muscle and tendon reflexes, loss of faradic and galvanic contractility, unchanged sensibility, and unimpaired mind and speech. Five cases of a similar nature have been seen in his mother's family. The boy has been kept in the hospital occasionally for periods of six months, so that careful blood examinations and a careful study of the body excretions could be made in order to determine if possible the presence of toxins. Whilst this has not been entirely successful I am not inclined to look upon the case as purely hysterical, but rather believe it is due to auto-intoxication.

SECOND DAY, MAY 3D.

DR. W. W. JOHNSTON of Washington, D. C., opened the proceedings by reading a paper, entitled

THE CONTINUED FEVER OF EPIDEMIC INFLUENZA.

The onset of fever is sudden in all cases of influenza. Sometimes a short acute, catarrhal stage is followed by prolonged fever, but more frequently the attack is very mild in the beginning, but progressive weakness and increasing fever finally forces the patient to seek medical health. As a rule, the evening temperatures are ascending for from two to five days. Defervescence is gradual, resembling typhoid, and the normal point is reached at different dates. The common characteristic of the latter stages of influenza fever is the long-continued minor oscillations and very delayed disappearance of the evening rise, long after patients have resumed a more active life. The recognition of the nature of this fever is sometimes difficult and it may be taken for enteric fever or even acute tuberculosis.

The second paper, entitled

SOME REMARKS ON TYPHOID FEVER AMONG THE AMERICAN SOLDIERS IN THE RECENT WAR WITH SPAIN,*

was read by DR. V. C. VAUGHAN, of Ann Arbor, Mich. In August, 1898, Dr. Sternberg appointed a board consisting of Major Walter Reed, U. S. A., Major E. C. Shakespeare, U. S. V., and the writer to study the causes and the spread of typhoid fever among the troops in the various camps within the United States. The members of the board have been and still are engaged in this investigation. The work is not completed,

but the board feels justified in formulating certain conclusions. We have visited all the large camps in the United States, making direct personal inspections, studying the water-supply, the quality and quantity of food, and its method of preparation, the nature of the soil of the camp, the space allowed regiments, the arrangement and size of the tents and number of men occupying each one, the location of sinks with reference to the mess-tent, the disposition of fecal matter, etc. Medical and other officers were called upon for testimony. Then followed a study of the records in the Surgeon-General's office.

The first striking point appeared in the first day's work at Camp Alger and consisted in the lack of scientific diagnosis of typhoid fever; most of the febrile cases were found to be diagnosed as malaria. At once competent men were asked for and furnished promptly by Dr. Sternberg to go to the various camps and make scientific examinations of the blood and apply the Widal-test in febrile cases. As a result of these careful examinations it can be stated that malaria was a very rare disease among the troops that remained in the United States, not one case being found at Camp Alger, for instance, and only one at Chickamauga. Our full report will contain in detail the evidence and reasons for saying that practically all the protracted febrile cases were typhoid. Not only was typhoid diagnosed as malaria, but it was covered up by other names. For instance, in one regiment the death-rate from indigestion amounted to fifteen per cent. of all the cases, and in another nearly all deaths were attributed to dengue.

The origin of typhoid in the large encampments is easily determined. So widespread is typhoid fever in this country that in assembling a regiment of volunteers the probabilities are that one or more men will be found to be infected with the disease, and about ninety per cent. of the volunteer regiments that went to Chickamauga were infected when they reached that place. How did it spread among the troops? The evidence concerning the possibility of water infection is for the most part negative. The most potent factor at most of the camps was camp pollution with fecal matter. The epidemic was not due in any respect to the sending of Northern men to Southern camps. In most of the camps fecal matter was deposited in pits which were open, and flies swarmed over it, and then, of course, walked over the food at the mess-tents. In many regiments fecal matter was deposited about the camp on the ground, and there were pieces of woodland near Chickamauga Park through which one could not walk without soiling his shoes. In many regiments paper soiled with fecal matter was blown about the camps. In fact, there was no adequate provision for disinfection of stools and prevention of infection.

DR. STERNBERG: It is certainly discouraging that after the lessons of the Civil War we should have had a repetition of camp infection by a disease that we recognize as due to filth. I had hoped for better things, that the profession in general would more fully appreciate the dangers, and I issued a sanitary circular describing the

means of avoiding such an infection. The line officers were many of them inclined to consider all talk about cleaning the camp, about flies carrying infection, etc., as a fad of the doctors, and would not recognize danger until the epidemic had occurred. I am afraid that the doctors throughout the country do not pay as much attention as they should to the sterilization of the excretions from typhoid patients, and these are the doctors that made up our regimental surgeons. Typhoid invaded practically all the camps, even those in Northern States, where the regiments never left the home camp. I can only hope that the results of this war may be impressed upon the profession, and that we may devise some way of avoiding similar disasters in the future.

DR. WILLIAM OSLER of Baltimore reported

A CASE OF HEMACHROMATOSIS, WITH EXHIBITION OF PATIENT.

The patient is a man of good family history, who noticed about four years ago that he had begun to change in color. He is a vigorous, healthy man, but on examination last Saturday I found a well-marked hypertrophic cirrhosis of the liver with enlargement of the spleen. He has the long duration of the disease, the increasing bronzing of the skin, the enlarged liver, and has had recurrent attacks of purpura. Examination of the urine shows the presence of iron.

DR. W. H. WELCH of Baltimore presented

A CASE OF HEMACHROMATOSIS, WITH EXHIBITION OF SPECIMENS.

I have brought over the specimens from a case of this disease which have been very thoroughly studied by Dr. Opie. The patient presented extreme pigmentation of the skin, and examination of the various organs of the body have shown that they are all more or less pigmented and have undergone hypertrophic changes. Two kinds of pigment are present, the iron-containing and iron-free pigment, the latter being found principally in the heart muscle and in the walls of the small intestine.

OTITIS MEDIA IN LOBAR PNEUMONIA OF CHILDREN was the title of a paper by DR. S. J. MELTZER of New York.

In the course of the last fifteen years I have observed a number of cases of lobar pneumonia in children at the beginning of which earache was the first and predominant symptom. All the cases had in common the following points: earache at the onset of the disease, lasting usually only one or two days, never outlasting the disease, and in none did it terminate in a discharge from the ear. With two exceptions the earache was on the same side with the pneumonia, and as far as I could ascertain in all cases there had been at some previous time an otitis media in the now aching ear. The literature shows that otitis media is a very frequent complication of catarrhal pneumonia in children, but I have found no mention of its being a complication of lobar pneumonia. In lobar pneumonia of children purulent otitis media is at least very rare, and I offer the hypothesis that the earache is possibly only a sympathetic pain of a chronically inflamed drum.

A paper, entitled

ENDOCARDITIS OF TONSILLAR ORIGIN, WITH A REPORT OF FIVE CASES,*

was read by DR. F. A. PACKARD of Philadelphia.

One of the most interesting questions in medicine at the present time is the etiology of acute articular rheumatism and each year there is a steadily growing assurance that it should be classed among the acute infections. I believe that the cases I shall report have been plain cases of acute tonsillitis and pharyngitis having no connection with rheumatism, and that the endocarditis arose as a direct consequence either of infection of the endocardium by micro-organisms, which gained entrance by way of the tonsils, or to structural changes in the mitral leaflets brought about by coagulation necrosis or through results of chemico-vital action of toxins produced by micro-organisms in the throat and absorbed by the inflamed tissues. It may be said that the tonsillitis and the endocarditis were simply "rheumatics," but there was no preceding or subsequent history of the presence of other members of the rheumatic group or of any of the ordinary rheumatic manifestations.

A CASE OF FATAL EPISTAXIS WITH A STUDY OF THE BLOOD*

was reported by DR. GEORGE DOCK of Ann Arbor, Mich.

This patient came to the hospital January 10th on account of severe nose-bleed. Five weeks before the nose had bled for four hours, "filling a wash-basin," and a week later there was another attack which lasted three hours. These attacks have been repeated several times and required plugging of the nares. There was a continuous oozing of blood into the posterior nares. Examination of the blood showed red corpuscles 1,120,000, leucocytes 13,300, and hemoglobin 25 per cent. There was general pallor of the eyegrounds, and on January 27th edema of the lungs developed and the patient died of the increasing dyspnea. Autopsy showed an endothelial carcinoma of the turbinated bones, secondary anemia, edema of the lungs, fatty degeneration and liquefaction of the heart muscle and hyperplasia of the liver and spleen. The serous membranes were the site of considerable hemorrhage.

The most important feature in the study of the blood was the presence of enormous numbers of enucleated red blood-cells and it is a most remarkable fact that in spite of the evidences of blood formation the actual renewal of the patient's blood did not take place.

The next paper, entitled

EXPERIMENTAL RESEARCH DISPROVING THE THEORY THAT PARAXANTHIN POISONING IS A CAUSE OF MIGRAINE,

was by DRS. FRANZ PFAFF and J. J. PUTNAM of Boston.

Careful analysis of the urine from a number of patients with the symptoms typical of migraine indicate that there is no increase of paraxanthin. In considering the work of Dr. Ratchford we are inclined to believe that the results obtained from experimentation with final fluids were

due to the fact that ammonium salts were not thoroughly removed.

THE ACTION OF HEPATIC, RENAL, AND OTHER CELLS UPON PHENOL AND INDOL, UNDER NORMAL AND PATHOLOGICAL CONDITIONS

was the title of a paper by DR. C. A. HERTER of New York.

Two methods were employed in this research. In one given weights of the normal liver, kidney, muscle, brain, and blood were minutely divided and then brought into contact with a known quantity of phenol or indol in watery solution and allowed to remain for periods of time varying from one to several hours, when the entire mixture was subjected to distillation. It was found that the distillate recovered from the liver contained less phenol than that from any other organ, and much less than that from a control distillate, making it clear that a certain amount of phenol was in some way transformed by contact with living cells. The blood and brain was found to possess only a slight transforming action, the kidney to act energetically, but less so than the liver, and muscle tissue to occupy a position intermediate. Similar results were obtained in the case of indol.

A second method of study consisted in introducing phenol and indol intravenously, killing the animals quickly and subjecting the triturated organs to distillation. These experiments justify the conclusion that the cells of the liver are more active than those of the kidney, muscle, or brain in removing aromatic substances from the blood and in effecting their rapid transformation.

Another series of observations was made with organs of animals placed under different pathologic conditions, such as prolonged anesthesia, poisoning by alcohol, staphylococcus septicemia, etc. These experiments indicate that some pathological conditions are capable of distinctly reducing the ability of the liver-cells to transform phenol and indol, and it was also found that the liver-cells in cases of fatty and cirrhotic livers were incapable of exerting their normal activity.

The next paper, entitled

ON THE TOXICITY OF THE URINE,*

was by DRS. F. FORCHHEIMER and R. W. STEWART of Cincinnati.

The conclusions as to toxicity of urine can be only tentative for all the cases; but positive for the majority. Those methods which exclude bacterial activity absolutely after the urine is passed are followed by comparatively no mortality. It would seem that most of the toxicity of urine is due to the formation of toxins by means of the action of bacteria upon some body or bodies in the urine. We are not justified in stating that there is no other toxicity, except that due to bacterial activity, but we are justified in making the statement that all those investigations that have been made in which this activity has been overlooked are to be regarded as inconclusive.

PERFORATION OF THE STOMACH BY A FOREIGN BODY IN AN INFANT SEVEN WEEKS OLD*

was reported by DR. T. M. ROTCH of Boston.

The patient, a child of seven weeks, was attacked suddenly with abdominal pain and vomiting. Symptoms of peritonitis developed, and on the fourth day a laparotomy was performed and the abdominal cavity irrigated. Three days later the infant died, and on post-mortem examination a minute perforation of the stomach was found in which was a small thread.

REVIEWS.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgery in Cornell University; Surgeon to the New York and Hudson Street Hospitals; Consulting Surgeon to Bellevue, St. John's, and Christ Hospitals; Corresponding member of the Société de Chirurgie de Paris. With 326 illustrations and 20 plates in monotint. New York and Philadelphia: Lea Brothers & Co., 1899.

PROFESSOR STIMSON'S volumes on fractures and dislocations, issued some fifteen years ago, have been classical sources of reference in difficult cases. The present single volume is the fruit of his riper experience, and "although in one sense of the word," as the author says in the preface, "this work is a second edition of the volumes published in 1883 and 1888, it has been so largely rewritten that it is practically new." The former two volumes have been condensed into one, a happy change in these days of the printing deluge, and their contents brought thoroughly up to date, for, though fractures and dislocations are as old as the race and the general principles of their treatment have long been known, there is an up-to-dateness of the subject very necessary for the general practitioner if he would save himself the worrisome opprobrium of imperfect or too slowly progressive results.

The work is characteristic of its writer in the thoroughly practical treatment of the subjects that divide surgical opinions generally just at present. While the book was in press we quoted (see MEDICAL NEWS, February 11, 1899) one of these eminently practical, thoroughly conservative, yet progressive views as to the vexed question of the treatment of fracture of the patella. Here is a like valuable opinion as to massage in the treatment of fractures: "A somewhat exaggerated opinion as to the value of massage has found expression in certain quarters. . . . A calmer and more judicial appreciation of its merits and limitations has succeeded. It appears to be beyond question that by its systematic and skilful use in suitable cases the primary swelling is lessened and disappears more promptly, the circulation and skin more rapidly regain their normal condition, the atrophy of the muscles is less and more promptly disappears, and the joints more quickly lose their sensitiveness and regain the range of motion which is possible under the changed skeletal conditions." Time was when the surgeon was satisfied if he got good union without deformity. The length of disability inflicted on the sufferer from fracture was scarcely considered, but now the *tuto*

cito et jucunde of the healing art has invaded even the treatment of fractures, and massage is evidently an important factor in this since it brings the advantages claimed for it by Professor Stimson.

The practical suggestions as to the method of massage, the leaving on of one molded splint while the manipulations are carried on if there is much tendency to displacement, and the suggestion as to the use of the rubber bandage under certain circumstances as an instrumental masseur, evidently emanate from a man whose knowledge of the subject comes from large clinical experience.

The summing up as to the value of ambulatory treatment is as satisfactory as that with regard to massage. A hint as to its introduction by an instrument-maker begins the section on the subject and is characteristically expressive. The real value there is in the method under certain circumstances is shown. These subjects of massage and the ambulatory treatment of fractures are questions that the general practitioner and student are interested in just now because they have been a good deal discussed in the journals and at medical societies. The true function of the text-book is to give definite, not dogmatic views, on such subjects so as to enable the practitioner who faces "a condition, not a theory," to draw his own conclusions.

We had hoped to find an equally interesting discussion of the subject of sprain fractures around the ankle-joint, on which the Röntgen-rays have given us some new light of late years. Perhaps the subject was not considered sufficiently settled as yet to be able to state definite conclusions.

The skiagraphic illustrations of the book are excellently reproduced; some of the best we have ever seen. The Röntgen-rays are of the greatest value in the diagnosis of fractures, yet they do not do away with the necessity for thorough clinical experience in the matter.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS. Edited by CHARLES JEWETT, M.D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, N. Y. Illustrated. Philadelphia and New York: Lea Brothers & Co., 1899.

THIS new text-book on the obstetric art represents the combined work of some of the best known writers on midwifery and cognate subjects in this country. A careful inspection of their labors shows that, under careful editing, they have succeeded in compiling a book of no ordinary merit, some parts of which, indeed, are classical in their worth. As a work of reference, it cannot well be excelled, for the opinions of the writers are supplemented by those of others of great weight and authority in the obstetric world. It may be that this very feature may detract from the worth of the book for the use of students who are notorious for their indifference as to the authority which is not that of their teachers. A serious student, however, like a serious practitioner, will be the gainer for having read and digested this book.

It is impossible in a weekly journal to review in minute detail a work of this size. The chapter on the diagnosis

and differential diagnosis of pregnancy is a splendid piece of logical writing and embraces some new features (Dr. Dickinson). The physiology of labor (Drs. Jewett and Buckmaster) is well handled and is free from the tedium which usually characterizes this subject. Drs. Robb and Bartley discuss the physiology of the puerperium including the care of the new-born child.

In the chapter on the pathology of pregnancy, the subtitles are: "Multiple Pregnancy" (Dr. Manton), "Anomalies and Diseases of the Fetal Appendages" (Dr. Etheridge), "Pathology of the Fetus" (Dr. Van Cott), "Abortion and Premature Labor" (Dr. Vineberg), "Ectopic Gestation" (Dr. Henrotin), and "Diseases of Pregnancy" (Dr. Etheridge). Dr. Henrotin's article on ectopic pregnancy may be cited as an example of the modernness of the book; there is no doubt expressed as to the operative treatment of this condition as the only one; there is no dodging the question as there is in some not very ancient books on this subject. The late Dr. Etheridge's article, too, shows an advance in this direction, that every conceivable ailment from which a pregnant or a non-pregnant woman may suffer is not included among the diseases of pregnancy.

Part VI., dealing with the pathology of labor, includes a consideration of the anomalies arising from disease, accident or the forces at work, and a very readable paper on eclampsia (Dr. Edgar), in which the author repeats his opinion that veratrum viride is of great service in this condition. Personally, we do not favor the view of regarding insanity arising during the puerperium as an entity distinct from similar conditions minus the influence of child-bearing; but the article by Dr. Hamilton gives due credit to heredity and this is some gain in the right direction.

The monograph by Dr. Williams on puerperal infection is alone an excuse for the publication of the book if one were needed. He advocates the immediate repair of even slight tears of the perineum as prophylactic of infection, although he does not advise the same treatment of slight lacerations of the cervix; he objects to a routine examination of the internal genitals after the conclusion of labor as favoring sepsis; curetting he recommends only when the contents of the uterus are not septic and when a general sepsis has not already supervened. Hysterectomy for puerperal sepsis is to be performed only when the process is limited to the walls of the uterus and intra-pelvic abscesses are, of course, to be opened. This paper for scientific clearness and accuracy and thoroughness is one of the best in the book and on the subject. The work concludes with a complete series of articles on obstetric surgery.

Profuse and handsome illustrations, many of them original, help to make the book attractive. Altogether, as a well grouped, scientific exposition of the art of midwifery as it is taught at the present day, this work by American authors stands easily among the highest.

ESSENTIALS OF MATERIA MEDICA, THERAPEUTICS AND PRESCRIPTION WRITING. By HENRY MORRIS, M.D., Fifth edition. Philadelphia: W. B. Saunders, 1899. SAUNDERS' question-compends have always been

popular among medical students, Dr. Morris' little book no less than the others of the series. The new edition is marked by ample reference to the newer drugs and by an insertion of dosages in the metric as well as in the apothecary systems.

THERAPEUTIC HINTS.

To Facilitate Feeding in Infantile Stomatitis.—It is very desirable to diminish the sensitiveness of the inflamed surface in this condition so that nourishment will be taken regularly by the child, and for this purpose orthoform has been used with success. Ten to twenty minutes before nursing or feeding a sufficient quantity of the drug, very finely powdered, is spread over the affected surfaces by insufflation. Care should be taken to avoid the soft palate and the pharynx as the unpleasant taste of the drug is otherwise made perceptible. No ill effects need be feared, and the analgesia obtained enables the child to take its nourishment willingly.

For Dyspepsia with Deficient Muscular Action.—MATHIEU considers bicarbonate of soda and ipecac to be most valuable for the stimulation of muscular action in the stomach. The soda should be taken an hour before meals, 45 grains at a dose, the ipecac in small doses ($\frac{1}{30}$ -1 grain), repeated several times at half-hourly intervals after meals. The following formulæ are recommended:

1. R	Tinct. ipecac.	.	.	.	3 iss
	Saccharini	.	.	.	gr. iss
	Menthol	.	.	.	gr. iv
	Spiritus (80 per cent.)	.	.	.	℥ i
	Syr. simpl.	.	.	.	℥ iv.

M. Sig. Two to four teaspoonfuls.

The menthol is added in order to control the nauseating action of the ipecac.

2. R	Tinct. ignatiæ	.	.	.	3 iss
	Tinct. ipecac.	.	.	.	℥. xv
	Tinct. anisi	.	.	.	℥. lxxx.

M. Filter. Sig. Six drops in Vichy.

The treatment should be continued for periods of 10 to 15 days, with intervals of rest of one week. As the muscular power increases the secretions are also affected favorably.

Toxicity of Orthoform.—Part of the praise heaped on this drug in its capacity of local anesthetic agent is based on the belief that no toxic effects can be ascribed to it. Drs. ALBERTIN, POLLESSON, and ROLLET of the Lyons Hospital have, however, reported several cases in which the application of orthoform to an extensive surface (as for burns) has been followed by symptoms of intoxication (headache, nausea and vomiting, fever, and erythema) which disappeared shortly after removal of the applied drug. The symptoms, while not severe enough to be dangerous, were very unpleasant, and sufficed to indicate to the physicians in charge that orthoform should be used cautiously and in small quantities.